# 1AC --- Big tech --- JCCC

## 1AC --- Platforms --- v3

### 1AC --- Advantage --- Primacy

#### The United States Federal Government should substantially increase prohibitions on platform utilities by expanding the scope of its core antitrust laws to include standards against owning and competing on a platform and the acquisition of potential and/or nascent competitors

#### The plan effectively limits big tech

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The Plan [Among Warren's 48 plans](https://www.investopedia.com/elizabeth-warren-s-economic-plan-explained-4706529), is the "How we can break up Big Tech" plan. According to her, companies acquire smaller rivals and use their proprietary online marketplaces to unfairly limit competition. Her plan to fix this consists of two main parts and some goals for the future: Online Marketplaces = Platform Utilities Warren wants to pass legislation that requires **online marketplaces** run by companies with annual global revenue above $90 million to be designated as "**platform utilities." Companies with annual global revenue above $25 billion will not be allowed to own** platform **utilities and participants** on it at the same time. In other words, companies will not be able to sell services on a public marketplace they own and control. Platform utilities will have to treat all users fairly and equally. If sued and found guilty of violating the neutrality requirement, they would have to pay a fine equal to 5% of their annual revenue. **Reversing mergers** Warren will also appoint federal regulators who will reverse "**illegal**" and "**anti-competitive**" mergers. Goals Her three goals are to give people more control over how their personal data is collected, shared, and sold, help news outlets and artists keep more of the value their content generates, and ensure that no foreign power uses social media to influence U.S. elections. What the Plan Means for the FAANGs **Facebook**: Under Warren's plan, Facebook's 2012 acquisition of Instagram and 2014 acquisition of WhatsApp would be reversed, something Zuckerberg called an "existential" threat. "Facebook would face real pressure from Instagram and WhatsApp to improve the user experience and protect our privacy," says Warren's campaign website. Seventy percent of U.S. adults and 51% of U.S. teens use Facebook, according to [Pew Research](https://www.pewresearch.org/fact-tank/2019/05/16/facts-about-americans-and-facebook/). However, 70% of U.S. teens use Instagram, the platform Facebook is using to compete with the likes of Snap Inc. and TikTok. The company will be depending on Instagram to drive ad revenue in the coming years. **Amazon**: Amazon.com Inc. ([AMZN](https://www.investopedia.com/markets/quote?tvwidgetsymbol=amzn)) would **not be allowed to sell its own products** alongside third-party sellers on Amazon.com, if Warren's legislation is passed. Its privately-owned brands, like AmazonBasics, would have to be spun off or shuttered. Its mergers with Whole Foods (2017) and Zappos (2009) would also be unwound. Most of the hundreds of brands Amazon owns haven't had too much success, but Oweise Khazi, senior principal at Gartner L2, told [Retail Dive](https://www.retaildive.com/news/with-private-brands-amazon-plays-the-long-game/550790/) that Amazon is "playing the long game" and will be studying the massive amount of data it has access to. **Apple**: Apple Inc. ([AAPL](https://www.investopedia.com/markets/quote?tvwidgetsymbol=aapl)) is not among the companies mentioned on Warren's official campaign website, but the **AppStore would also qualify as a platform utility**. This means Apple would not be able to sell its own applications, like Apple Music and Apple News, on the platform. “It’s got to be one or the other,” said Warren when asked about it by [The Verge](https://www.theverge.com/2019/3/9/18257965/elizabeth-warren-break-up-apple-monopoly-antitrust). “Either they run the platform or they play in the store. They don’t get to do both at the same time.” This would come in the way Apple's Services business ambitions. Netflix: Netflix Inc. ([NFLX](https://www.investopedia.com/markets/quote?tvwidgetsymbol=nflx)) faces little regulatory risk at this point. In March 2019, BMO Capital Markets made Netflix its top technology stock instead of Amazon for this reason, according to [CNBC](https://www.cnbc.com/2019/03/15/bmo-favors-netflix-over-amazon-because-of-sen-warren.html). The debate about whether the company is a budding [monopoly](https://www.investopedia.com/terms/m/monopoly.asp) with its massive original content budget is still ongoing. Alphabet Inc. ([GOOGL](https://www.investopedia.com/markets/quote?tvwidgetsymbol=googl)): **Google’s Ad Exchange and** Google **Search are both platform utilities** under the proposed law and would **need to be spun off**. Alternatively, Google would have to stop including its own comparison shopping service, restaurant ratings etc. in search results, because it would be competing with other companies like Yelp, and separate its business from Ad Exchange. Its acquisitions of Waze, Nest and DoubleClick would also be unwound

#### The advantage is Primacy:

#### Future tech is the only credible threat China will pose to U.S primacy --- The ability of the U.S to leverage private innovation is key

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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.

#### Two Internal links ---

#### First---Integration---Big tech is integrating with China --- That undermines Tech development and makes it a zero-sum game

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The claim that big American tech companies are somehow an alternative to Chinese dominance—or, in the more extreme form, that they are competing with China on behalf of the United States—is largely backwards. In fact, many big American tech companies are operating in China, working with Chinese companies, and seeking to expand. Because markets and the state are intertwined in China, interactions with Chinese companies and investments in China are likely to pass along operational and technological developments to the Chinese government and military, including in ways that advance its emerging surveillance state—and accelerate its ability to spread its model of digital authoritarianism around the world. In short, big tech companies that operate in China are likely assisting the rise of China, not acting as a hedge against it. Rather than competing with China, many big tech companies are integrating with China or attempting to deepen their integration with China. Google has announced an AI center in Beijing,8 and it is exploring a partnership with Tencent that involves using the Chinese tech giant’s cloud service as an alternative to Google Cloud.9 In 2018, the company also proposed Project Dragonfly, which would have created a search engine that would be in compliance with Chinese censorship regulations behind the Great Firewall.10 That endeavor created controversy within the firm and criticism from human rights groups.11 Other companies also operate in China or are seeking to do so. Microsoft is expanding data centers in China and has built an operating system, “Windows 10 China Government Edition,” for the Chinese government.12 After Alibaba, Amazon provides the largest cloud service in China, and its Amazon Web Services division works with local companies and is expanding its data centers.13 Apple, of course, famously designs its phones in California but makes them in China.14 In 2017, Apple announced a partnership with a Chinese firm with close ties to the government and a year later moved its Chinese iCloud and iCloud encryption services to China.15 Notably, Facebook isn’t operating in China—but not for lack of trying. The company has repeatedly attempted to gain access but has been blocked by government officials.16 Merely operating in China might not seem like it undermines the claim of U.S.-Chinese competition. After all, it might be that American companies are seeking to steal market share from Chinese companies in China. Global dominance requires, unsurprisingly, dominance around the globe, including in the world’s biggest markets. The problem is that, according to scholars, U.S. government officials, and even American business associations, any U.S. company that is developing AI in China, making significant technological investments in China, or simply operating in China is likely supporting the Chinese government and military. Chinese companies are often state-run, partly owned by the state, or have informal ties to state and Communist Party officials, as scholars have documented.17 Formal and informal ties allow the government to have influence over many companies, and they create an incentive for companies to comply with party preferences preemptively even without formal government pressure.18 Cooperation and partnerships with these companies therefore mean cooperation with state-directed aims. “No major Chinese company,” Senator Mark Warner has noted, “is independent of the Chinese government and Communist Party.”19 An official at the U.S. Chamber of Commerce goes even further, arguing that American firms going to China have “to please the Chinese government and the Communist Party.”20 Moreover, because artificial intelligence is a dual-use technology, ostensibly commercial innovations can also have military implications. China’s stated doctrine of “civil-military fusion” thus virtually guarantees that companies are indirectly assisting the military if they are working with Chinese entities.21 Under that doctrine, “any technologies held by the private or academic sectors—whether imported or developed in-house—must be shared with the Chinese military.”22 When combined with the corporate-state relationship in China, this means the technological innovations in the private sector are likely being shared with the government for military purposes. As former defense secretary Ash Carter has noted, “If you’re working in China, you don’t know whether you’re working on a project for the military or not.”23 The fact that Chinese companies and the state are intertwined means that American companies working in China are potentially helping accelerate the adoption of digital authoritarianism within China and its spread abroad. In general, the development of artificial intelligence “offers a plausible way for big, economically advanced countries to make their citizens rich while maintaining control over them.”24 Big data, combined with AI, enables governments and big tech companies not only to predict but also to shape what individuals will do. Politically, this means that governments will have the power to preempt dissenters to a far greater degree than authoritarian regimes of the past.25 Economically, it means that centralized economic planning might find greater success than in the past, because governments and companies can shape the behavior of individuals.26 And over time, behavioral changes shape beliefs, potentially building support for the regime itself.27 These dynamics suggest that the new “digital authoritarianism” may have greater staying power than its low-tech precursors.28 At home, China has long been concerned about domestic disharmony and has pursued a policy of “social management” to achieve “holistic” security—not just national security but party organization and the management of the social order.29 The Chinese State Council sees AI as “irreplaceable” in ensuring social harmony in the future.30 China has taken steps to develop a “social credit system,” in which individuals are assessed in every interaction to determine their trustworthiness, their compliance with laws and social norms, and the degree to which their social networks are also compliant. Chinese tech companies have reportedly agreed to share data with the government in support of this project.31 Local governments and tech companies are cooperating to develop “credit cities,” the local counterpart to a full-on national system.32 Chinese companies are also already exporting surveillance technologies abroad, including biometric censors and facial recognition software.33 Given that many big American tech companies are operating in China or seeking to do so and that engagement with Chinese entities likely means information is transferred to the government, the idea that big American tech companies are helping the United States vis-à-vis China in some kind of Cold War-style technology arms race makes little sense. It is just as likely, if not much more so, that firms operating in China are directly or indirectly furthering China’s emergent domestic surveillance capabilities, its military use of those technologies, and its spread of digital authoritarianism abroad as well.34 How Big Tech’s Entanglements Threaten American Power and Values In addition to benefiting Chinese power, big tech’s integration with China threatens the United States by creating leverage over the United States, and it could, in the future, undermine the American ecosystem of free speech and expression. This could happen in multiple ways: Integration opens the United States to espionage and surveillance, creates economic leverage over the United States, and preemptively forces companies to adhere to the standards of Chinese censors, thereby restricting speech and expression particularly on issues related to democracy. Most obviously, integration with China raises concerns about espionage and surveillance. For example, Pentagon officials have been concerned that if the Chinese company Huawei operates 5G systems among American allies, the United States will have to restrict intelligence sharing along such systems; if those systems have surveillance capacities or backdoors, information across the system could be captured by the Chinese government.35 Federal regulators have also flagged a Chinese company’s acquisition of the dating app Grindr, which has a great deal of personal information that could be used to pressure or blackmail users.36 More broadly, economic interdependence can be used as leverage for political purposes. Scholars refer to this by a variety of terms, including “geoeconomics,”37 “reverse entanglement,”38 and “weaponized interdependence.”39 But the tactics are similar regardless of the label— and China utilizes them frequently. To retaliate against South Korea’s adoption of a U.S. missile defense system, China blocked tourism to the country.40 And it blocked imports from Norway after dissident Liu Xiaobo was awarded the Nobel Peace Prize.41 Interdependence in the economy generally, and in the technology sector specifically, thus bring significant risks to the United States in an era of great power competition. The more integrated the economies of two countries, the more likely it is that a foreign country will have leverage over the United States. The use of boycotts is one example. But raising tariffs to start a trade war could devastate sectors of the economy, and interrupting a supply chain for essential parts and components (whether consumer, commercial, or military) could have significant consequences, particularly in a crisis. Integration also means that corporations are contorting their operations outside of China in order to comply with the preferences of Chinese censors. The most prominent concern is self-censorship—companies and other actors that change their messages, artistic choices, or statements for fear of offending Chinese censors. For example, the general manager of the Houston Rockets basketball team tweeted support for the Hong Kong protestors, only to backtrack in the face of concerns about the Chinese reaction.42 The People’s Daily branded Mercedes-Benz an “enemy of the people” after the car manufacturer posted a quote from the Dalai Lama on Instagram; Mercedes later deleted the post.43 Some university researchers are concerned about self-censorship within academia on topics related to China.44 Hollywood studios are reportedly changing dialogue, scenes, and themes in movies in order to comply with Chinese censors.45 And tech companies too have taken steps toward compliance with Chinese internet regulations: Apple, for example, “removed VPNs [virtual private networks] from the Chinese version of its App Store.”46 Google’s Project Dragonfly was controversial internally with employees for the same reason. Why does it matter if corporations change their behaviors based on Chinese preferences? After all, global companies have done so for many years. McDonald’s and Coca-Cola, for example, offer different menus and beverages in different countries to respond to the tastes and preferences of consumers. The shift in corporate behavior in response to Chinese preferences differs in two ways. First, unlike the McDonald’s and Coca-Cola examples, companies aren’t just changing their products within China. They are doing so globally. That the leaders of Mercedes won’t quote the Dalai Lama and Hollywood writers are changing scripts for blockbuster films because they might offend Chinese censors means that American audiences are subject to the views of Chinese censors, as is the rest of the world. Second, the willingness of these companies to adhere to Chinese preferences calls into question whether global firms can be trusted when they seek to lobby or influence the U.S. government. In the mid-twentieth century, the maxim “what’s good for General Motors is good for America” suggested a link between corporate success and national success. That is unlikely to be the case anymore (if it ever was). Under the dominant ideology of contemporary corporate lawyers—who see shareholder profits as the sole aim of corporate managers—corporate managers are required to pursue profitable operations; American national interests are not part of the calculus.47 A global corporation that gains most of its profits from abroad might therefore have profit-based interests that do not align with American national interests. To put a fine point on it, one could imagine a company that seeks to expand its access into China lobbying the United States government in ways that are detrimental to American interests and, indeed, even serve the interests of the Chinese government. This is not to say that corporate executives or lobbyists are foreign agents deliberately pursuing such an aim—or that they think of themselves that way and would state as much to government officials. This wolf comes in sheep’s clothing: Policies will likely be justified as pursuing neutral economic principles, and many who advocate for them might not even see the broader connections. Defenders of integration often suggest that narrowly drawn regulations can address any problems that might arise from integration, though at least some defenders consider even limited restrictions on economic integration to be disastrous.48 For example, one set of think tank scholars have argued for requiring transparency in Chinese corporation ownership (that is, to identify state-owned or -invested companies) as a way to prevent Chinese influence over American corporations. 49 Another set says that U.S. policy should consider “who owns a company’s stock, how the company is governed, and whether it has sizable contracts with the Chinese military or defense industry. ... Similarly, companies with executives close to the state, through either prior employers or personal connections, warrant further scrutiny.”50 A third argues that “the United States should work with its allies and trading partners to pressure Beijing to open up the Chinese market to foreign companies, curb its preferential treatment of Chinese firms, and better protect foreign companies’ intellectual property.”51 If it is correct that the Chinese state and market are integrated, as a number of senior defense officials and scholars of the Chinese state and market have argued,52 then these policy solutions cannot meet the nature of the challenge. Transparency rules will not solve the problem of informal ties between government and private sector in China, nor do they place mandates on companies if there are formal ties. Careful investigation of the relevant relationships and ownership ties might miss important connections, ignore the fact that Chinese doctrine requires civil-military fusion, and neglect to address the incentive companies have to comply preemptively with Chinese government preferences, even absent any specific connection to the government or pressure from the government. Finally, efforts to reduce preferential treatment and protect American intellectual property run counter to the fact that the integration of state and market in China is not a bug, but a central feature of the system. How Breaking Up Big Tech Builds a More Resilient Economy and Democracy What does bigness have to do with integration? Or to put it differently, is the real problem integration with China rather than a weak antitrust and regulatory regime to govern big tech companies? The question of integration with China as a general matter is beyond the scope of this essay, but the size and dominance of American tech companies is part of the problem, and breaking up big tech should therefore be part of the solution. To see why, compare a concentrated ecosystem with a small number of big companies to a competitive ecosystem with a large number of small companies. In a concentrated ecosystem with few players, China will have far more leverage over the United States. A small number of big tech companies that are integrated with China will be more dependent on Chinese markets for consumers and profits—and, in turn, more vulnerable to pressure from the Chinese government. In contrast, in a fractured market with many players, it is much more likely that some will seek other sources for supply chains, develop domestic American capacities, or simply choose not to engage in the Chinese market—whether because of idiosyncratic preferences, competitive dynamics, product differentiation, higher costs, or other factors. It is theoretically possible that we might instead expect another outcome: A small number of tech firms making monopoly profits might not need Chinese markets and therefore would be more independent from that country’s fusion of politics and economics. Likewise, a multi-player ecosystem of smaller companies, each with razor-thin profit margins, might push all of these players to dependence on Chinese markets for consumers and profits (this is, of course, where debates over integration versus disentanglement are relevant). But theory is not reality, and this alternative hypothesis has not been borne out. In our current highly concentrated tech market, big tech companies are not forsaking Chinese markets out of a combination of morality, patriotism, and monopoly profits. They are operating in China and are desperate to integrate further. Concerns about censorship and distorted practices are also significantly reduced in a competitive ecosystem of smaller players because some companies and creative gatekeepers won’t aim to comply with Chinese government preferences. Consider the Hollywood context. Disney’s share of box office sales domestically, for example, approaches 40 percent, and the six biggest studios have 85 percent of box office sales.53 These companies produce fewer films and, because of their market power, can contractually require that those films be shown in theaters in ways that block other films.54 These companies are also increasingly integrating vertically across production and distribution: Netflix both produces shows and operates a streaming service, as does Amazon and now even Disney. The result is that smaller players are likely to face a tilted playing field because integrated behemoths can prioritize their own content over competitors and might not take chances on content that isn’t likely to maximize their viewership goals.55 If these big integrated companies comply with Chinese censors because of their ambitions in the Chinese market, then American consumers will not see content that doesn’t adhere to Chinese government preferences. In contrast, in a system with a large number of small studios, many would not have the size and scope to play to the Chinese market, let alone be dependent on the Chinese market. They also wouldn’t have the power and scale to preference their own content over competitors through vertical integration. The result would be an ecosystem in which Americans will have a range of content choices—including entertainment that might not accord with the views of foreign censors. Big tech companies are not likely immune from what is happening in Hollywood—as well as what has happened to Mercedes and other entities that seek to operate in China. Many of these companies, like Amazon and Google, seek access to Chinese markets and operate as both content producers and distributors or platforms. To the extent that they have divisions whose work is objectionable to censors in foreign countries (Amazon, of course, creates its own content; as does YouTube, which is a subsidiary of Google), they too will feel pressure to preemptively shape that content in ways that are palatable to censors. And because of their market power within the United States, U.S. consumers are likely to be left with fewer and fewer serious scalable alternatives. Finally, in a competitive ecosystem with many players, concerns about the ill effects of lobbying are mitigated as well. In a system with a few dominant players, efforts to lobby the United States government should be seen as highly questionable because of companies’ dependence on Chinese markets. A multi-player ecosystem addresses this challenge in two ways: First, many companies will not be dependent on Chinese markets. Second, in a multi-player ecosystem, differentiated companies are less likely to have shared interests and are more likely to end up on different sides of policy questions.56 This means that their lobbying efforts are less likely to cut in a single direction and thus less likely to capture government. This insight is not a new one—it is foundational to American political and constitutional thought. In Federalist 10, James Madison argued that in a political ecosystem with many groups with differentiated interests, no particular faction would be able to capture government.57 Instead, they would cancel each other out and enable policymakers to pursue the public good. Competition between interests, not the dominance of a few interests (particularly if foreign-influenced), preserves a free and democratic government.

#### Second---Innovation---Big tech destroys the DIB and suppresses innovation --- National champions is historically bunk

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BIG TECH AND THE FOUNDATIONS OF AMERICAN POWER American power is also critical in a time of great power competition. Here too, the case for protecting big tech and restricting competition in the tech sector is weak. Under conventional market theory—and economic practice—competition sparks innovation. If the United States wants to continue to be at the forefront of technological innovation, then more competition is desirable, not less. Breaking up and regulating big tech will thus improve innovation, not reduce it. America’s position in a great power rivalry also depends on its defense industrial base—the resilience and capacity of its defense sector. But a concentrated defense sector means less innovation in defense, higher prices for taxpayers to procure defense systems, and a functional redistribution of taxpayer funds from R&D or other kinds of spending to profits for defense contractors. As technology becomes more integrated with defense, the same dangers of a concentrated defense industrial base could emerge with respect to the defense technological base. Breaking up and regulating big tech, combined with R&D funding, would likely instead create a more competitive defense sector and a more innovative, more resilient, and cheaper one too. Big Tech, Competitiveness, and Innovation One of the central arguments against breaking up and regulating big tech on national security grounds is that big tech companies are essential for innovation in the tech sector and thus for American competitiveness and ultimately for national security. Historically, however, **innovation has come from** a mix of **competition** and public funding of research and development. Breaking up and regulating tech companies thus doesn’t mean ceding ground to the Chinese on technological innovation—it means creating a competitive marketplace with great innovative capacity. Whether or not they say it explicitly, those who want to protect big tech from antitrust and regulation support a national champions model. The national champions approach suggests that innovation takes place within big companies that are protected from competition and therefore have resources to spend on research and development. Some associate this approach with Joseph Schumpeter, who suggested that firms in competitive markets might be less innovative than monopolists.58 In this vein, commentators celebrate how Bell Labs was able to innovate for generations and see Google X, Facebook, and other tech companies as similarly investing in frontier research that will ultimately lead to innovative breakthroughs.59 While innovation can take place under a national champions model, innovation does not require national champions—and there are strong arguments that the **national champions approach is** limited and even **counterproductive**. First, as Tim Wu has noted, “[B]oth history and basic economics suggest we do much better trusting that fierce competition at home yields stronger industries overall.”60 This response, of course, has been commonplace in basic economics for decades and in debates on competition is linked to the views of Kenneth Arrow.61 Market competition is good for innovation because competitors have to find ways to differentiate themselves in order to survive and expand. In contrast, large protected firms get lethargic, are slow to innovate, and rest on their laurels Wu points out that we also have evidence—not just theory—to show that protecting national champions is inferior to encouraging competition. In the 1980s, Wu argues, **Japan took** the approach of protecting its **national champions** in the electronics industry. Powerhouses like NEC, Panasonic, and Toshiba had direct government support. In contrast, **the United States took the opposite** tack with IBM. The computer firm was brought under antitrust scrutiny, and the legal battle went on for more than a decade, along the way chilling Big Blue from engaging in any conduct that could even potentially run afoul of the antitrust laws. **The result**, Wu notes, **was** to create the space for a variety of hardware and software companies, **Microsoft, Lotus, and Apple** among them. **Competition led to innovation** and the creation of some of the most forward-looking companies of the era.62 Second, national champions can actually limit innovation because they have an incentive to avoid research and innovations that might jeopardize their business model or undermine their dominant position. Bell Labs, for example, has long been celebrated for its role as an “ideas factory.”63 But **Bell and AT&T** also **suppressed innovations** when they threatened its business model. Bell inventors, for example, developed recording devices in the 1930s that could have been used for answering machines. But AT&T’s management blocked their emergence for fear that they would jeopardize use of the telephone.64 An alternative approach to innovation is one that relies less on protectionism for national champions and more on market competition and on public investment in research and innovation. Competition, as noted already, can be a powerful motivator for innovation. When big tech incumbents face little competition, society forgoes the innovation benefits that come from competition. Who knows if Instagram or WhatsApp could have dethroned Facebook’s primacy and developed even more new and innovative products? Facebook’s moves to acquire those firms prevented us from ever finding out. What small businesses might emerge if they didn’t have to compete with Amazon Basics on Amazon’s Marketplace? **Unwinding mergers and separating platforms from companies that do business on the platform would help** spur competition and **lead to** innovation. Some might argue that **robotics, AI, and quantum computing** are so resource-intensive that an ecosystem of smaller companies engaged in fierce competition would mean that no company would have the resources available to invest in those next-generation technologies. There are a few responses to this argument. First, it is not clear that breaking up and regulating big tech would prevent those firms from having the considerable resources to develop the technologies of the future. Facebook would still have billions of users, even without Instagram and WhatsApp, for example. Amazon’s platform would still have enormous market power. Second, and more importantly, part of the answer is that the decision to break up and regulate tech companies should be accompanied by public investment in R&D. One of the primary arguments for the national champions view is that monopolists have the resources to be able to invest in innovation because they do not face competitive pressures.65 But any system of innovation operates against a backdrop of laws and public policy.66 The ability to capture the gains of innovation depends on intellectual property law. The possibility of winning government contracts for frontier projects that require innovation is determined by procurement policies. And, of course, an alternative to monopolist investment in R&D is public investment in R&D. These policy choices all shape the innovation ecosystem, and it is not at all obvious why society has to accept national champions instead of thinking about revising these laws and policies more broadly. Given the emphasis that proponents of national champions place on research and development, it is worth noting that historically, as Mariana Mazzucato has argued, government has been a significant driver of innovation through its research and development efforts.67 Today, one could easily imagine the government spending considerable sums of money on R&D in artificial intelligence, robotics, quantum computing, augmented and virtual reality, and other technological research. Public investment in research has a variety of benefits. First, because it is not tied to the profit motive and business model of a single company, it covers a wider range of subjects, leading potentially to innovations that would otherwise go undiscovered. Public investment extends to basic research that does not have immediate or foreseeable commercial applcations. It could also include research into areas that might challenge the incumbency and business models of existing companies. Second, and relatedly, public investment into research is less likely to be geared toward improving surveillance capacity. As long as the biggest companies have surveillance, personalized targeting, and behavioral response at the heart of their business models, research and innovation within those companies will likely be geared, in no trivial part, toward improving those activities. A digital authoritarian country might see that as a valuable public goal, but it is not at all clear why a free and democratic society should. Public-sponsored research might instead be directed toward a variety of socially beneficial uses other than continual improvement of individual monitoring and behavioral reactions. Notably, as there are more opportunities in research outside of the big tech companies, many talented people might choose to work on a wider range of problems. Third, public investment in R&D has the potential to spread the benefits of technology, innovation, and industry throughout the country. At present, much of the country’s technological and intellectual prowess is concentrated in a few regions, the most prominent being northern California, Seattle, and Boston. Geographic inequality has a variety of negative consequences—economic, social, and political.68 But, as economists Jonathan Gruber and Simon Johnson show in their book Jump-Starting America, there is no reason that public investment couldn’t spur successful economies in dozens of mid-sized cities all over the country, with spillover benefits for their regions.69 Unlike government action, technology companies have no reason to develop the capacities of all regions of the country. Amazon’s so-called competition for its second headquarters is a good example. After much public attention, the company settled on New York City and a suburb of Washington, D.C., two superstar cities. Artificial intelligence, of course, requires considerable data in order to improve precision and accuracy. One of the arguments for big tech is that such companies alone are able to collect this data and use it. But there is no reason why this has to be the case either. Consider two alternate possibilities. First, the United States could create a public data commons that would be highly regulated to protect privacy. The public data commons would include publicly available data from a variety of government sources, and qualifying businesses, local governments, or nonprofits could train their machines using this data. Any new data they collect from users could then be fed back into the data commons (de-identified), so that the data commons improves in quality and quantity of data over time.70 Second, we could imagine requiring big tech companies to make their data available in interoperable formats. If these companies effectively have a monopoly power over data, then they could be regulated as monopolies—and one condition of their continued protection as monopolies could be enabling access to the datasets. Again, there is no legal or regulatory reason why these kinds of policy options are impossible. And in either case, they would enable a larger number of players to innovate than does the status-quo, stand-pat approach to protecting big tech from competition. Big Tech and the Defense Industrial Base Concentration in the tech sector also threatens the defense industrial base due to higher costs, lower quality, less innovation, and even corruption and fraud.71 Each of these dynamics has already been a problem for America’s over-consolidated defense industrial base. As technology becomes more and more central to defense and national security, it is likely that these same dynamics will replicate themselves with big tech companies. This will become a national security threat, both directly, in terms of the quality and speed of procurement, and indirectly, by reducing innovation and functionally redirecting defense budgets from research spending to higher monopoly profits.72Conventional economic theory suggests that monopolists have the ability to increase prices and reduce quality because consumers are captive.73 When it comes to defense spending, the Government Accountability Office commented in 2019 that “competition is the cornerstone of a sound acquisition process and a critical tool for achieving the best return on investment for taxpayers.”74 At the same time, the GAO observed that “portfolio-wide cost growth has occurred in an environment where awards are often made without full and open competition.”75 Indeed, it found that 67 percent of 183 major weapons systems contracts had no competition and almost half of contracts went to a handful of firms. Of course, consolidation also means that the Defense Department is in a symbiotic relationship with these big contractors. Some startup executives wanting to sell to the government thus see the Pentagon as “a bad customer, one that is heavily skewed in favor of larger, traditional players,” and they don’t feel like they can break into the sector.76 Standard stories about political economy and capture also suggest that these firms will have outsized power over government.77 As Frank Kendall, the former head of acquisitions at the Pentagon, has said, “With size comes power, and the department’s experience with large defense contractors is that they are not hesitant to use this power for corporate advantage.”78 In the defense context, that means monopolists retain power (and profits), even if they overcharge taxpayers and risk the safety of military personnel in the field. In an important article in The American Conservative on concentration in the defense sector, researchers Matt Stoller and Lucas Kunce argue that contractors with de facto monopoly at the heart of their business models threaten national security. They write that one such contractor, TransDigm, buys up companies that supply the government with rare but essential airline parts and then hike up the prices, effectively holding the government “hostage.”79 They also point to L3, a defense contractor that had ambitions to be a “Home Depot” for the Pentagon, as its former CEO put it. L3’s de facto monopoly over certain products, according to Stoller and Kunce, means that it continues to receive lucrative government contracts, even after admitting in 2015 that it knowingly supplied defective weapons sights to U.S. forces.80 Consolidation also threatens U.S. defense capacity. The decline of competition, according to a 2019 Pentagon report, leaves the military vulnerable to “sole source suppliers, capacity shortfalls, a lack of competition, a lack of workforce skills, and unstable demand.”81 With a limited number of producers, there is less talent and knowhow available in the country if there is a need to build capacity rapidly.82 In 2018, the Defense Department released a report on vulnerable items in the military supply chain, including numerous items in which only one or two domestic companies (and, in some cases, zero domestic companies) produced the essential goods.83 How did the United States lose so much of its industrial base? The combination of consolidation and global integration is part of the story. As Stoller and Kunce argue, companies consolidated in the 1980s and 1990s while shifting emphasis from production and R&D to Wall Street-demanded profits. Globalization then allowed them to shift production overseas at a lower cost. The result was to gut America’s domestic industrial base—and, in many cases, to shift it to China, which engaged in a decades-long strategic plan to develop its own industrial base. The result, in the words of the 2018 Defense Department report, is that “China is the single or sole supplier for a number of specialty chemicals used in munitions and missiles.” In other areas too, the risks of losing access to critical resources are real. Describing the problem of limited carbon fiber sources, the same Pentagon report notes, “[a] sudden and catastrophic loss of supply would disrupt DoD missile, satellite, space launch, and other defense manufacturing programs. In many cases, there are no substitutes readily available.”84 As technology becomes more integral to the future of national security, it is hard to see how big tech will not simply go the way of the big defense contractors. Corporate mottos not to “be evil” are long gone,85 and big tech companies spend millions on conventional Washington, D.C., lobbying efforts.86 Over time, as contracts move to tech behemoths, there will no longer be competitive alternatives, and the Pentagon will likely be locked into relationships with big tech companies—just as they currently are with big defense contractors.87 Some commentators suggest that robust antitrust policies are a problem because only a small number of tech companies can contract for defense projects.88 But there is another way to look at it: The goal should be to encourage competition in the tech sector so that there are multiple contractors available. As former secretary of homeland security Michael Chertoff has said, defending the antitrust case against Qualcomm, “a single-source national champion creates an unacceptable risk to American security—artificially concentrating vulnerability in a single point. ... We need competition and multiple providers, not a potentially vulnerable technological monoculture.”89 The consequence of consolidation in tech is that taxpayers will likely see higher bills even as innovation slows due to reduced competition. Worse still, every taxpayer dollar that goes to monopoly profits—whether in the form of higher prices or fraud and corruption—is a dollar that is not going toward innovation for the future. A concentrated defense sector means not only less innovation due to the lack of competition in the sector; it means that funding that could have been available for innovation instead gets redirected via monopoly profits to the pockets of big tech executives and shareholders.

#### Chinese tech lead quickly collapses US primacy

Nouwens, 15 (Meia Nouwens, Senior Fellow for Chinese Defence Policy and Military Modernisation, Meia holds a BA Hons in international relations and political science from Macquarie University, a master’s in international relations and diplomacy from Leiden University in conjunction with the Clingendael Institute, and an MPhil in modern Chinese studies from the University of Oxford and Peking University., 10-29-2015, accessed on 8-9-2021, IISS, "China’s pursuit of advanced dual-use technologies", https://www.iiss.org/blogs/research-paper/2018/12/emerging-technology-dominance)//Babcii

In the realm of defence, too, AI plays a current and future role. **Beijing aims to** build high-technology weaponry that would enable China to **leapfrog the United States’ currently superior** military **capabilities**, integrating advanced technologies like AI and big data into the PLA. AI will be incorporated into Chinese military technologies across domains, from unmanned combat aerial vehicles (UCAVs) and drone swarms to fire-and-forget modes for China’s varied missile arsenal and cyber-attacks. Importantly, the PLA aims to use AI to support intelligent operations and system-of-systems warfare.61 According to Shen Shoulin and Zhang Guoning, ‘”brain supremacy” (the ability to interfere with or damage the cognition of the enemy) **will replace earlier warfare concepts seeking military dominance over land, sea, air and more recently space and cyber domains’**.62 Once intelligence supremacy is achieved over enemies in the information space, **supremacy over other domains is rendered meaningless**, according to this approach.63 AI will also be imperative to intelligent monitoring and early-warning systems.64

#### That 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.**

#### Primacy collapse causes nuclear proliferation and escalation --- It also causes Jacksonian policies that result in US interventionism

Fay, 17 (Matthew Fay, Director of Defense and Foreign Policy Studies The Niskanen Center, 11-16-2017, accessed on 12-19-2021, Niskanen Center, "America Unrestrained?: Engagement, Retrenchment, and Libertarian Foreign Policy - Niskanen Center", https://www.niskanencenter.org/america-unrestrained-engagement-retrenchment-libertarian-foreign-policy/)//Babcii

American retrenchment could similarly lead to an anarchic, **multipolar Europe**—thus **increasing** the chances of **war** on the continent. Such a system could engender nationalist sentiments among the populations of Europe, heightening animosities between national groups. These heightened animosities could help **erode norms against military aggression** that have facilitated the decline in interstate war. Nationalist groups within a country can seize on these sentiments to **pursue confrontational and expansionist policies**.89 Encouraging support for increased military capabilities through nationalism might lead populations to see war as once again a means to national glory or maintaining national honor. Matters of national prestige and honor can lead to the initiation of wars when bound up in territorial claims, while at the same time increasing the intensity and duration of a conflict.90 Nationalism and security competition might also erode the pacifying effects of economic openness. Realism suggests states are concerned about relative gains.91 States in security competition might be wary of trading with one another due to concerns about how a potential rival’s economic gains might provide it with an advantage if translated into military power. They may also adopt autarkic policies for fear of undermining their economic and military self-sufficiency.92 Territorial conquest has become increasing anachronistic in international politics. However, the proliferation of protectionist policies might once again make aggression and preventive war seem like strategically sensible ways for states to secure the resources necessary to reduce the ability of potential rivals to cut them off economically. If the risk of territorial aggression increases, the possession of nuclear weapons would become an **attractive** option for some **states whose security was previously guaranteed by the United States**. Nuclear weapons are most useful for deterring major territorial aggression, meaning their potential utility increases as the potential for war does.93 A number of U.S. allies have either previously pursued nuclear weapons or have the capability to do so. They might choose to obtain a nuclear arsenal once responsible for their own security. There are at least two reasons why increasing the number of nuclear weapons states may not have the pacifying effect some realists suggest they do. First, states do not always adopt the second-strike—that is, retaliatory—postures realists assume they will. Recent research shows that even in the paradigmatic case of mutual assured destruction—the Cold War superpower standoff—neither the United States nor the Soviet Union abandoned the search for a first-strike capability.94 Moreover, political scientist Vipin Narang’s research on India-Pakistan nuclear relations has demonstrated that states sometimes adopt risky postures in pursuit of goals other than deterrence.95 Second, an increased number of nuclear weapon states will increase the chances nuclear weapons will be used even if states do adopt second-strike postures. On the one hand, simple organizational pathologies or political instability in a new nuclear state could lead to an accidental or unauthorized nuclear launch.96 On the other hand, even for retaliatory postures, effective deterrence requires that states credibly signal that they are willing to use nuclear weapons in retaliation for an attack. To do so requires that nuclear states in competition with one another must maintain **a willingness to risk nuclear war. The greater the number** of these “competition[s] in risk taking,” as Thomas Schelling called them, **the more likely it is that nuclear weapons will be used** at some point.97 The situation in Northeast Asia helps illustrate how increasing the number of nuclear weapons states increases the probability that nuclear weapons will be used. **Absent U.S. security guarantees**, there is a real possibility that **Japan, Taiwan, and South Korea** would build nuclear arsenals of their own given their concerns about China and North Korea.98 There are currently two nuclear dyads in the region: the United States and China, and the United States and North Korea. If Japan, Taiwan, and South Korea all acquired nuclear weapons, there would be at least **five additional dyads**: China and Taiwan, China and Japan, China and South Korea, North Korea and South Korea, and North Korea and Japan. Given lingering tensions from its pre-1945 occupation of the Korean Peninsula, a South Korea-Japanese nuclear dyad is entirely plausible as well.99 Each new dyad adds a contest in risk-taking, which increases the chances that nuclear weapons will be used in the region.100 Though America’s geographic isolation insulates it from many the threats of an increasingly competitive and unstable world, it does not provide absolute immunity. As noted above, Christopher Layne rightly highlights the major wars in Europe in which the United States did not become involved. However, the question should not be about frequency of American involvement in major power wars in Eurasia. Instead, it should be about the cost when the United States does become involved in such a conflict. The purpose of insurance is to protect against low frequency, high-cost events. There was a relatively low probability that the Soviet Union would have invaded Western Europe during the Cold War, but the United States invested in deterring an invasion because the costs of an actual war would have been higher.101 While the United States avoided involvement in a number of European wars, the major conflicts the United States did become involved in were high-cost events. At the height of World War II, the United States spent 37 percent of its gross domestic product on its military.102 More than 8 percent of the U.S. population was in uniform at the war’s peak.103 The size of the American state expanded massively during this time.104 The United States did not need a formal military alliance with any of the belligerents prior to either of the world wars to become involved in the conflicts. America’s involvement in World War II suggests that one way the United States might become involved in another major war is if some former U.S. allies fail to build their military capabilities in the face of aggressive powers. Neoclassical realist scholars refer to this problem as “underbalancing.”105 According to this theory, states may fail to internally balance against a threat due to domestic political factors.106 If states fail to check an aggressive power, it could pave the way for the type of hegemonic threat realists believe would require American military action. If such a threat materialized, and if frontline states failed to contain it, the offshore balancing logic underpinning retrenchment recommends the United States regenerate its military capabilities to defeat it. Mearsheimer argues that these periodic military buildups are a feature of offshore balancing strategies. He writes: Offshore balancers like the United Kingdom and the United States tend to maintain relatively small military forces when they are not needed to contain a potential hegemon in a strategically important area… [W]hen it is necessary for an offshore balancer to check a potential hegemon, it is likely to sharply expand the size and strength of its fighting forces, as the United States did in 1917, when it entered World War I, and in 1940, the year before it entered World War II.107 Retrenchment assumes that this process would be somewhat mechanical. The United States, aware of a new threat and the inadequacy of frontline states to counter it, would convert its latent material strength into military power to confront, and if necessary, militarily defeat the threatening state.108 However, the process is unlikely to be as automatic or frictionless as realists suggest. Drawing on America’s economic resources to tap its latent military power would not provide the same advantage it did before World War II for two reasons. First, changes in military technology would make it difficult for the U.S. military to return to regions where it previously positioned forces. While modern technology enables the United States to project military power around the globe, it also makes it easier for potential adversaries to increase the cost of doing so. A number of states hostile to American interests have already procured anti-access and area denial (A2/AD) capabilities as a cost-effective means to prevent the U.S. military from operating near their respective territories.109 Second, tapping American economic power to mobilize for war would not be the same as it was before World War II. The economic conditions that obtained before the world wars are no longer with us. There is no great surplus of labor and idle manufacturing capacity as the Great Depression had provided the United States when it converted to a war economy prior to World War II.110 Converting to a war economy today would therefore require far-reaching political and social disruptions. In light of those disruptions, any effort to mobilize the American public for war would require a unifying mechanism. Realists assume **nationalism is that mechanism**. Ordinary Americans are unlikely to get worked up over the abstract threat of a distant regional hegemon in Eurasia. **Confronted with a new military threat** in Eurasia, American leaders are likely to rouse what historian Walter Russell Mead refers to as the **populist “Jacksonian” tendency** in American foreign policy. This tendency, Mead argues, **leads to American wars that are particularly violent and destructive**.11

#### Even a regional war causes nuclear winter --- guarantees extinction

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Nuclear warfare could have devastating impacts on millions of people, yet it has been suggested that regional or global nuclear conflict may be possible in the future (Toon et al., 2019). In addition to the calamitous impacts of nuclear conflict on a local level, research conducted with a range of climate models finds a global cooling in response to various conflict scenarios (Coupe et al., 2019; Malone et al., 1985; Mills et al., 2014; Pausata et al., 2016; Robock et al., 2007; Turco et al., 1983). This global cooling is driven by fires started by the nuclear weapons. These fires inject smoke into the upper troposphere, where rapid lofting can spread the sunlight-absorbing soot particles into the stratosphere (Turco et al., 1983). Recent research implies that even a small nuclear conflict may have impacts on the global climate system, affecting the state and circulation of the atmosphere (Robock et al., 2007), increasing the sea ice extent in both hemispheres (Mills et al., 2014), and reducing plant productivity and crop yields in regions far from the conflict location (Özdogan et al., ˘ 2013; Toon et al., 2019; Xia & Robock, 2013). While less studied, the potential impacts of nuclear conflict on the ocean are many. Numerous physical, chemical, and biological processes in the ocean are temperature dependent, and sunlight is a critical ingredient for photosynthesizing phytoplankton at the base of the marine food web. Using a climate model with an interactive ocean, Mills et al. (2014) evaluated the ocean physical response to a potential India/Pakistan nuclear war that lofts 5 Tg of black carbon particles into the stratosphere; they find a 0.8◦ C decrease in globally averaged sea surface temperature, with smaller temperature reductions at depth. Recently Toon et al. (2019) used an Earth system model that includes a representation for phytoplankton to evaluate the ocean biological response to nuclear conflict; they report a 5–15% decrease in phytoplankton productivity under a range of conflict scenarios. Such findings prompt further investigation into how nuclear conflict and the resulting global cooling may alter the chemical state of the ocean. Perturbations in the ocean's carbonate chemistry are of particular interest, owing to their importance for ocean acidification. Ocean acidification is an ongoing, large-scale environmental problem driven by fossil fuel emissions of carbon dioxide (CO2). Cumulatively since the preindustrial era, the ocean has absorbed 41% of the carbon emitted by human industrial activities (McKinley et al., 2017). While this ocean absorption of carbon has partially mitigated anthropogenic global warming, it has fundamentally altered the carbonate chemistry of the ocean, increasing the concentration of hydrogen ions ([H+]) while decreasing the concentration of carbonate ions ([CO2− 3 ]). Observations collected at time series sites across the global ocean find statistically significant reductions in the potential hydrogen (pH = −log([H+])) and the saturation state of the calcium carbonate mineral aragonite (Ωarag, which is proportional to [CO2− 3 ]) over the past few decades (Bates et al., 2014). These changes are a direct consequence of the ocean absorption of anthropogenic carbon; carbonate chemistry dictates that the excess carbon will react with water and CO2− 3 to decrease ocean pH and Ω (Feely et al., 2004). Both of these changes may have negative consequences for marine organisms, in particular for those that precipitate calcium carbonate shells (e.g., coccolithophores, pteropods, foraminifera, corals, molluscs, and echinoderms), as the precipitation is hindered by low pH, and because decreases in Ω favor shell dissolution (Doney et al., 2009). To date, there have been no studies of the effects of nuclear conflict on ocean acidification, though past modeling studies on the ocean's response to volcanic forcing and to proposed geoengineering schemes have intimated that ocean carbonate chemistry is highly sensitive to these types of external forcings. Using a fully coupled carbon-climate model, Frölicher et al. (2011) find that volcanic-induced cooling following the 1991 Mt. Pinatubo eruption led to immediate increases in the flux of carbon from atmosphere to ocean and consequently, increases in the total dissolved inorganic carbon (DIC) concentration in the surface ocean. Eddebbar et al. (2019) demonstrate that air-to-sea CO2 fluxes are significantly enhanced following the eruptions of Agung, El Chichón, and Pinatubo in a large ensemble of simulations with an Earth system model. Matthews et al. (2009) conduct solar radiation management climate engineering simulations with an intermediate complexity model of the coupled climate-carbon system; they find changes in ocean pH and Ωarag as a result of the anomalous cooling. Similarly, Lauvset et al. (2017) indicate that radiation management geoengineering leads to changes in North Atlantic pH in a fully coupled Earth system model, but they do not explore changes in Ωarag. While these studies are suggestive of the carbonate chemistry response to nuclear conflict, the external forcing perturbations are of a different magnitude and duration than those imposed by nuclear conflict. Further, it is difficult to mechanistically understand the ocean carbonate chemistry response to such external forcing perturbations in fully coupled models, where the terrestrial response to forcing additionally influences the atmospheric CO2 concentration. Here, we use a state-of-the art Earth system model to simulate the ocean carbonate chemistry response to a range of nuclear conflict scenarios. We decouple the ocean carbon cycle from that of the terrestrial carbon cycle via a direct prescription of the atmospheric CO2 boundary condition used for air-sea CO2 flux, that is, changes in the terrestrial biosphere have no influence on the atmospheric CO2 that the ocean sees. As we will demonstrate, we find large perturbations in ocean pH and Ωarag as a result of nuclear conflict. These perturbations have relatively long duration (order of 10 years) and are driven by decreases in temperature and subsequent increases in the ocean carbon inventory. 2. Methods We analyse output generated by the Community Earth System Model (CESM) version 1.3, a state-of-the-art coupled climate model consisting of atmosphere, ocean, land, and sea ice components (Hurrell et al., 2013). The atmosphere component of CESM in our simulations is the Whole Atmosphere Community Climate Model (WACCM; Marsh et al., 2013) with nominal 2◦ resolution, 66 vertical levels, and a model top at ∼145 km; it uses the Rapid Radiative Transfer Model for GCMs (RRTMG; Iacono et al., 2000) for the radiative transfer. The Community Aerosol and Radiation Model for Atmospheres (Bardeen et al., 2008) is coupled with WACCM to simulate the injection, lofting, advection, and removal of soot aerosols in the troposphere and stratosphere, and their subsequent impact on climate (Coupe et al., 2019; Toon et al., 2019). The ocean component of CESM is the Parallel Ocean Program version 2 (Danabasoglu et al., 2012) with nominal 1◦ resolution and 60 vertical levels. The biogeochemical ocean component of CESM is the Biogeochemical Elemental Cycling model that represents the lower trophic levels of the marine ecosystem, full carbonate system thermodynamics, air-sea CO2 fluxes, and a dynamic iron cycle (Doney et al., 2006; Moore et al., 2004, 2013; Moore & Braucher, 2008; Long et al., 2013; Lindsay et al., 2014). LOVENDUSKI ET AL. 2 of 9 Geophysical Research Letters 10.1029/2019GL086246 The ocean in the coupled CESM simulation is initialized from rest with World Ocean Circulation (WOCE) temperature and salinity (Gouretski & Koltermann, 2004). Biogeochemical tracers are initialized to observationally based climatologies where possible (Lauvset et al., 2016); where these were not available (such as dissolved iron and phytoplankton biomass), the model is initialized with fields interpolated from an existing CESM simulation. The new, fully coupled simulation was spun up for 4 years to an approximate steady state with a constant atmospheric CO2 mixing ratio of 370 ppm, representative of the mixing ratio in the year 2000. Due to the relatively short spin-up period, the globally integrated air-sea CO2 flux is not in steady state (drifting at a rate of 0.14 Pg C year−2) when the perturbation forcing is applied. We therefore present our results as anomalies from the drifting control integrations. Three control simulations of 20-year duration are generated using round-off level differences in atmospheric initial conditions. As each of these control simulations has different phasing of internal variability (e.g., El Niño-Southern Oscillation), we use the standard deviation across this ensemble to identify statistically significant perturbations due to nuclear conflict. We report on the anomalies generated from four simulations of nuclear conflict with varying amounts of soot injection: three India/Pakistan conflict scenarios that inject 5, 27, and 47 Tg of soot, respectively, and one US/Russia conflict scenario that injects 150 Tg of soot. The initial soot injection amounts are generated from plausible scenarios for nuclear conflict following advice from a number of military and policy experts; the reader is referred to Toon et al. (2019) for further details on scenario development. In each case, we prescribe that the conflict begins on 15 May of the 5th year of the first control simulation, and we integrate the model for a 15-year period following the injection. We assume that the smoke generated by mass fires from nuclear conflict is injected into the upper troposphere above the target sites (in the U. S./Russia case, smoke is spread evenly over the two nations), as in Toon et al. (2019). WACCM lofts much of this smoke higher into the stratosphere via solar heating of black carbon aerosols in the smoke, where the black carbon aerosols persist for about a decade. The resulting annual mean, post-conflict (May to the following April) anomalies in aerosol optical depth are shown in Figure 1a. These optical depth changes result in a 10–40% reduction in incoming solar energy (Toon et al., 2019). While we discuss the anomalies generated from all four of these conflict simulations, we describe two in greater detail throughout this manuscript: the U. S./Russia case, as it is the largest climate perturbation overall, and the India/Pakistan 47-Tg case, as it is the largest climate perturbation generated by a regional nuclear conflict. Ocean biogeochemistry in the version of CESM used for our simulations has been extensively validated in the literature (Brady et al., 2019; Freeman et al., 2018; Harrison et al., 2018; Krumhardt et al., 2017; Lindsay et al., 2014; Lovenduski et al., 2015, 2016; Long et al., 2013, 2016; Moore et al., 2013; McKinley et al., 2016; Negrete-García et al., 2019). Of particular note for our study, the simulated surface ocean carbonate ion concentration from a long, preindustrial control simulation of CESM compares favorably with reconstructed observations, albeit with lower interannual variance than has been measured at subtropical time series sites (Lovenduski et al., 2015). In Figure S1 in the supporting information, we illustrate the comparison between observationally based estimates of surface ocean pH and Ωarag (from GLODAPv2; Lauvset et al., 2016) and the CESM control ensemble mean. In this comparison, we note that the observational estimates have been extensively interpolated and are intended to represent year 2002 carbonate chemistry parameters, whereas CESM has been integrated under an atmospheric CO2 mixing ratio that corresponds to year 2000 forcing. We find high correspondence between the spatial patterns of modeled and observed pH and Ωarag, giving us confidence that CESM is capable of representing the mean state of these two variables. 3. Results Globally averaged surface ocean pH increases in response to each of the nuclear conflicts, where the magnitude of the pH anomaly scales with the amount of soot injected (Figure 1b). In each case, the pH anomaly exceeds the interannual standard deviation of pH in the control ensemble mean (gray shading in Figure 1b). We observe the largest increases in surface ocean pH in response to the U. S./Russia 150-Tg case; here the globally averaged surface ocean pH anomaly exceeds 0.05, corresponding to a ∼10% decrease in the global mean hydrogen ion concentration. Under each scenario, the pH anomaly peaks 2–4 years after the conflict and persists for ∼10 years. With the exception of the high-latitude oceans, the pH increase following the nuclear conflict is pervasive across the surface ocean (Figures 2a– 2c). In the 47-Tg India/Pakistan scenario, we observe local pH anomalies exceeding 0.06 units on average in years 2–5 post conflict (Figure 2c); the anomalies are largest in the North Atlantic, North Pacific, and Equatorial Pacific. These large, abrupt changes in surface ocean pH may have important consequences for calcifying organisms, as shell precipitation can be affected by the ambient hydrogen ion concentration in seawater (Kroeker et al., 2013). Since the beginning of the industrial revolution, global ocean pH has dropped by an estimated 0.1 units (Ciais & Sabine, 2013). The anomalies in pH generated by our simulations exceed 50% of this historical change and occur over a much shorter time period. Whether and how organisms respond to the initial and rapid alleviation of low pH, followed by an immediate return to the current pH state in the global ocean, is as yet unknown (see, e.g., Haigh et al., 2015). In contrast to our results for pH, we observe decreases in surface ocean Ωarag following nuclear conflict (Figure 1c), which should tend to inhibit the maintenance of shells and skeletons in calcified organisms. While minimal changes in Ωarag are simulated for the 5-Tg India/Pakistan case, the other three cases produce large decreases in saturation state, on the order of 0.1 to 0.3 units (Figure 1c). In each of these three cases, the anomalies exceed the interannual standard deviation of Ωarag in the control ensemble mean (gray shading in Figure 1c). The peak response in these three cases occurs 3–5 years post conflict, a year or so later than the pH response. While for pH the globally averaged anomaly is negligibly small, 10-years post conflict; anomalies in globally averaged Ωarag persist beyond our 15-year simulation time frame for all conflict scenarios. The decreases in aragonite saturation state span the tropics and subtropics, with the exception of the central and eastern Equatorial Pacific region (Figures 2d– 2f). Local decreases in saturation state exceed 0.5 units in the western North Atlantic and western North Pacific under the 47-Tg India/Pakistan scenario (Figure 2f). Importantly, the simulated decreases in saturation state are highly pronounced in regions that host diverse coral reef ecosystems (for instance, the western and southwestern Pacific and the Caribbean), and like pH, the changes in saturation state occur fairly rapidly. Projections from climate models suggest that coral reef ecosystems across the world will experience aragonite saturation state declines from their preindustrial value of 3.5 to 3.0 by the end of the century (Ricke et al., 2013); alarmingly, our simulations project similar Ωarag declines over a 3- to 5-year period, which then persist for years after the initial forcing dissipates. The opposite-signed anomalies in pH and Ωarag induced by nuclear conflict seem puzzling at first, as for "typical" anthropogenic ocean acidification scenarios, both of these variables simultaneously decrease. Why would nuclear conflict cause opposing responses in pH and saturation state? To understand these opposing responses, we need to consider the carbonate chemistry system in seawater and its sensitivity to changing temperature. Gaseous CO2 reacts with seawater to form carbonic acid (H2CO3), which then dissociates to form H+ and bicarbonate (HCO− 3 ). The hydrogen ion then reacts with CO2− 3 to form additional HCO− 3 , CO2 + H2O− ↽−−−−−−⇀−H2CO3. (1) H2CO3− ↽−−−−−−⇀−H+ + HCO− 3 . (2) H+ + CO2− 3 − ↽−−−−−−⇀−HCO− 3 . (3) The equilibrium constants for these reactions (typically expressed as K0, K1, and K2, respectively; Sarmiento & Gruber, 2006) are sensitive to changes in temperature, for example, the cooling induced by nuclear conflict. We need to also consider the dissolution reaction for mineral calcium carbonate (CaCO3) in seawater, CaCO3(s)− ↽−−−−−−⇀−Ca2+ sat + CO2− 3,sat, (4) where [Ca2+]sat and [CO2− 3 ]sat are the concentrations of dissolved calcium and carbonate in equilibrium with mineral CaCO3, and the solubility product (Ksp) for this reaction is also sensitive to temperature (Sarmiento & Gruber, 2006). Further, the saturation state for a calcium carbonate mineral in seawater (here: aragonite), can be expressed as Ωarag = [Ca2+][CO2− 3 ] Ksp , (5) where both [CO2− 3 ] and Ksp are affected by changes in temperature (Ca2+ is highly abundant in seawater, and thus changes in temperature do not affect its concentration enough to matter for CaCO3 dissolution; Emerson & Hedges, 2008; Sarmiento & Gruber, 2006). Thus, we can decompose the anomalies in pH and Ωarag into the component driven by temperature-induced changes in the carbonate chemistry equilibrium constants (K0, K1, K2, and Ksp) and the component driven by all other changes to the carbonate chemistry system, such as changes in the DIC concentration, the alkalinity, or the salinity. We approximate the temperature sensitivity of the equilibrium constants using a program developed for CO2 system calculations (CO2SYS; van Heuven et al., 2011) via finite difference approximation. The component driven by all other changes to the carbonate system is computed as the residual of the other two terms. The pH response to nuclear conflict is the sum of two opposing drivers: an increase in pH driven by a decrease in sea surface temperature that alters the carbonate chemistry equilibrium constants and a decrease in pH driven by an increase in the DIC concentration of the upper ocean. Figure 1b illustrates the temporal evolution of the components of the global pH anomalies from the India/Pakistan 47-Tg simulation driven by changes in the equilibrium constants versus all other changes in the carbonate chemistry system. The equilibrium constant-driven pH anomaly is positive, peaking 2–3 years after the conflict, whereas the “other” component of the pH anomaly is negative, peaking 3–5 years after the conflict. The resulting total pH anomaly is positive, indicating that it is more strongly influenced by changes in the equilibrium constants than other changes. In the India/Pakistan 47-Tg case, globally averaged temperature reaches a minimum 2 to 3-years post conflict; the model initially produces 3.5◦C–4◦C anomalies at the surface that rewarm toward pre-conflict values for the duration of the simulation (Figure 3a). In contrast, surface ocean salinity-normalized DIC anomalies peak 3 to 5-years post conflict (Figure 3b), mainly as a result of the enhanced solubility of CO2 in colder seawater. While decreasing biological export production also contributes to increased DIC in the surface ocean, this signal is small relative to the change driven by enhanced air-to-sea CO2 flux (e.g., Figure S2). The delay in DIC relative to temperature anomalies is a result of the long (order months to years) timescale for CO2 to fully equilibrate with the surface mixed layer (Emerson & Hedges, 2008). The cold, high DIC surface anomalies slowly propagate into the global ocean thermocline; we observe 1◦ C and 10 mmol m−3 anomalies in temperature and DIC, respectively, at a depth of 300 m that persist beyond the length of our simulation (Figure 3). As there are no significant anomalies in global mean alkalinity or salinity post conflict (not shown), we conclude that the DIC perturbation drives the “other” component of the pH anomalies. We find similar behavior for these components in the other conflict scenarios (not shown). The negative Ωarag anomalies post conflict are driven by a combination of lower temperatures and higher DIC concentrations. Colder surface temperatures tend to increase Ksp, while higher surface DIC concentrations tend to decrease [CO2− 3 ], resulting in lower Ωarag values post conflict. Figure 1c illustrates that the DIC (other) component dominates the total Ωarag anomaly for the India/Pakistan 47-Tg simulation. As for pH, the equilibrium constant component peaks earlier than the other component; this is due to the timing of the temperature and DIC perturbations (Figure 3). The spatial patterns of the post-conflict surface pH and Ωarag anomalies in the India/Pakistan 47-Tg scenario (Figures 2c and 2f) result from perturbations in local surface ocean temperature and DIC (Figure S3). Negative temperature anomalies and positive DIC anomalies are pervasive in the tropics and extratropics, with the exception of the eastern Equatorial Pacific, where a large and long-lasting El Niño-like event develops following the conflict (Coupe, et al., manuscript in review). This strong reduction in the equatorial trade winds greatly weakens upwelling in the cold tongue region, producing near-zero surface temperature anomalies and a reduction in vertical DIC supply here (Figure S3). In the Southern Ocean, temperature and DIC are not much affected by the nuclear conflict, likely a result of enhanced upwelling of warm water from the subsurface (Harrison, et al., manuscript in preparation). Taken together, the aforementioned changes in temperature and DIC lead to increases in pH and decreases in Ωarag over most of the ocean surface (Figure S4). The changes in surface ocean pH that we simulate for nuclear conflict resemble the simulated response of pH to volcanic eruptions, but are an order of magnitude larger. Figure S5 illustrates the anomaly in surface ocean pH in the first year following the eruptions of Agung, El Chichón, and Mt. Pinatubo, as estimated by the CESM Large Ensemble (Kay et al., 2015), which uses the same physical and biogeochemical ocean components as in our nuclear conflict simulations. The ensemble mean isolates the evolution of the Earth system under historical external forcing, including the aerosol loading following volcanic eruptions (Eddebbar et al., 2019), and averages across the various representations of internal variability (Deser et al., 2012; we note that ensembles are not necessary for the nuclear conflict scenarios since the much larger magnitude of forcing provides a higher signal-to-noise ratio). The anomaly in the ensemble mean shown here thus cleanly captures the response of surface ocean pH to volcanic eruptions. Here we show the anomaly in preindustrial pH (pH anomalies in equilibrium with preindustrial atmospheric CO2, which is computed simultaneously with contemporary pH at model run time), as the contemporary pH anomalies include also the response to increasing atmospheric CO2 from one year to the next. The similarity in the spatial patterns of volcanically induced pH anomalies and those produced under nuclear conflict is striking (cf. Figures S5 and 2c), suggesting that volcanic forcing produces similar temperature, DIC, and thus pH anomalies (including the El Niño-like response to volcanic forcing in the eastern Equatorial Pacific, described in Eddebbar et al., 2019). However, the eruption-driven pH anomaly is both smaller (an order of magnitude) and of shorter duration (∼2 years) than in the India/Pakistan 47-Tg simulation. Unfortunately, a similar analysis of volcanic Ωarag anomalies in the CESM Large Ensemble was not possible as preindustrial [CO2− 3 ] was not saved to disk. 4. Conclusions and Discussion We report on the surface ocean pH and Ωarag anomalies generated from four simulations of nuclear conflict using the CESM with full ocean carbonate system thermodynamics. Globally averaged surface ocean pH increases in response to each conflict, with the largest increases in the North Atlantic, North Pacific, and Equatorial Pacific Ocean. The pH anomalies persist for 10 years post conflict and are primarily driven by changes in the carbonate chemistry equilibrium constants as a result of decreases in sea surface temperature. In contrast, CESM simulates globally averaged decreases in surface ocean Ωarag in response to nuclear conflict, with the largest decreases in the tropics and subtropics. The Ωarag anomalies persist beyond the length of our 15-year simulations and are driven by a combination of changes in the carbonate chemistry equilibrium constants and the solubility-driven increases in DIC. We further demonstrate that the surface pH anomalies induced by nuclear conflict resemble those induced by volcanic eruptions in the same modeling system. The simulated changes in global and regional pH and Ωarag as a result of nuclear conflict are large and abrupt. In the most extreme forcing scenario (U. S./Russia 150 Tg), over a period of ∼5 years, global surface ocean pH increases by 0.06 units, and Ωarag decreases by 0.3 units. To put these numbers into perspective, this simulated rate of change of pH is 10 times larger than the rate of change we have observed over the past two decades as a result of ocean acidification (−0.0018 year−1; Lauvset et al., 2015). Worryingly, surface ocean Ωarag decreases more than six times faster than has been observed in the open ocean over the past three decades (−0.0095 year−1 at the Bermuda Atlantic time series; Bates et al., 2014). While the cooling associated with nuclear conflict rapidly and briefly alleviates the decline in pH associated with ocean acidification, the increase in solubility causes the ocean to absorb ∼11 Pg of excess carbon in a 10-year period, leading to a rapid drop in Ωarag. Whether and how calcifying organisms might respond to such rapid and opposing changes in pH and Ωarag is as yet unknown. In order to measure organism response to ocean acidification, a majority of laboratory studies perform CO2 bubbling perturbation experiments, which simultaneously decrease the pH and Ωarag in the surrounding seawater solution (Pörtner et al., 2014). This simultaneous change in two carbonate chemistry parameters challenges our ability to isolate the organism response to changes in pH or changes in Ωarag alone. A recent laboratory sensitivity study of marine bivalve larvae used chemical manipulation experiments to decouple these two parameters; they found that larval shell development and growth were negatively impacted by decreasing Ω and unaffected by changes in pH (Waldbusser et al., 2014). If these sensitivities are sustained in other organisms, we might conclude that calcifying organisms would be severely affected by nuclear conflict. Our findings shed light on the ocean biogeochemical response to other forms of extreme external forcing, such as volcanic eruptions (Eddebbar et al., 2019; Frölicher et al., 2011) and solar radiation management climate engineering (Lauvset et al., 2017; Matthews et al., 2009). They may further inform the study and understanding of the role of ocean acidification in marine extinction following the Chicxulub impact event (Henehan et al., 2019). Importantly, our results suggest that even a regional nuclear conflict can have an impact on global ocean acidification, adding to the list of the many, far-reaching consequences of nuclear conflict for global society.

#### Extinction first --- Living is a pre-req for any other issue, magnitude is nearly infinite, and future gains in quality of life ensure it’s a prior question

Todd 17 [Ben has a 1st from Oxford in Physics and Philosophy, has published in Climate Physics, once kick-boxed for Oxford, and speaks Chinese, badly. "The case for reducing extinction risk." https://80000hours.org/articles/extinction-risk/]

In this new age, what should be our biggest priority as a civilisation? Improving technology? Helping the poor? Changing the political system? Here’s a suggestion that’s not so often discussed: our first priority should be to survive. So long as civilisation continues to exist, we’ll have the chance to solve all our other problems, and have a far better future. But if we go extinct, that’s it. Why isn’t this priority more discussed? Here’s one reason: many people don’t yet appreciate the change in situation, and so don’t think our future is at risk. Social science researcher Spencer Greenberg surveyed Americans on their estimate of the chances of human extinction within 50 years. The results found that many think the chances are extremely low, with over 30% guessing they’re under one in ten million.2 We used to think the risks were extremely low as well, but when we looked into it, we changed our minds. As we’ll see, researchers who study these issues think the risks are over one thousand times higher, and are probably increasing. These concerns have started a new movement working to safeguard civilisation, which has been joined by Stephen Hawking, Elon Musk, and new institutes founded by researchers at Cambridge, MIT, Oxford, and elsewhere. In the rest of this article, we cover the greatest risks to civilisation, including some that might be bigger than nuclear war and climate change. We then make the case that reducing these risks could be the most important thing you do with your life, and explain exactly what you can do to help. If you would like to use your career to work on these issues, we can also give one-on-one support. How likely are you to be killed by an asteroid? An overview of naturally occurring extinction risks An overview of naturally occurring extinction risks A one in ten million chance of extinction in the next 50 years — what many people think the risk is — must be an underestimate. Naturally occurring extinction risks can be estimated pretty accurately from history, and are much higher. If Earth was hit by a 1km-wide asteroid, there’s a chance that civilisation would be destroyed. By looking at the historical record, and tracking the objects in the sky, astronomers can estimate the risk of an asteroid this size hitting Earth as about 1 in 5000 per century.3 That’s higher than most people’s chances of being in a plane crash (about one in five million per flight), and already about 1000-times higher than the one in ten million risk that some people estimated.4 Some argue that although a 1km-sized object would be a disaster, it wouldn’t be enough to cause extinction, so this is a high estimate of the risk. But on the other hand, there are other naturally occurring risks, such as supervolcanoes.5 All this said, natural risks are still quite small in absolute terms. An upcoming paper by Dr. Toby Ord estimated that if we sum all the natural risks together, they’re very unlikely to add up to more than a 1 in 300 chance of extinction per century.6 Unfortunately, as we’ll now show, the natural risks are dwarfed by the human-caused ones. And this is why the risk of extinction has become an especially urgent issue. A history of progress, leading to the start of the most dangerous epoch in human history If you look at history over millennia, the basic message is that for a long-time almost everyone was poor, and then in the 18th century, that changed.7

Chart, line chart

Description automatically generated

This was caused by the industrial revolution — perhaps the most important event in history. It wasn’t just wealth that grew. The following chart shows that over the long-term, life expectancy, energy use and democracy have all grown rapidly, while the percentage living in poverty has dramatically decreased.8

Timeline

Description automatically generated

Literacy and education levels have also dramatically increased:

Chart

Description automatically generated

**People** also seem to become happier as they get wealthier. In The Better Angels of Our Nature, Steven Pinker argues that violence is going down.9 Individual freedom has increased, while racism, sexism and homophobia have decreased. Many people think the world is getting worse,10 and it’s true that modern civilisation does some terrible things, such as factory farming. But as you can see in the data, many important measures of progress have improved dramatically. More to the point, no matter what you think has happened in the past, if we look forward, improving technology, political organisation and freedom gives **our descendant**s the **potential to solve our current problems**, and have vastly better lives.11 It is possible to end poverty, prevent climate change, alleviate suffering, and more. But also notice the purple line on the second chart: war-making capacity. It’s based on estimates of global military power by the historian Ian Morris, and it has also increased dramatically. Here’s the issue: improving technology holds the possibility of enormous gains, but also enormous risks. Each time we discover a new technology, most of the time it yields huge benefits. But there’s also a chance we discover a technology with more destructive power than we have the ability to wisely use. And so, although the present generation lives in the most prosperous period in human history, it’s plausibly also the most dangerous. The first destructive technology of this kind was nuclear weapons. Nuclear weapons: a history of near-misses Today we all have North Korea’s nuclear programme on our minds, but current events are just one chapter in a long saga of near misses. We came near to nuclear war several times during the Cuban Missile crisis alone.12 In one incident, the Americans resolved that if one of their spy planes were shot down, they would immediately invade Cuba without a further War Council meeting. The next day, a spy plane was shot down. JFK called the council anyway, and decided against invading. An invasion of Cuba might well have triggered nuclear war; it later emerged that Castro was in favour of nuclear retaliation even if “it would’ve led to the complete annihilation of Cuba”. Some of the launch commanders in Cuba also had independent authority to target American forces with tactical nuclear weapons in the event of an invasion. In another incident, a Russian nuclear submarine was trying to smuggle materials into Cuba when they were discovered by the American fleet. The fleet began to drop dummy depth charges to force the submarine to surface. The Russian captain thought they were real depth charges and that, while out of radio communication, the third world war had started. He ordered a nuclear strike on the American fleet with one of their nuclear torpedoes. Fortunately, he needed the approval of other senior officers. One, Vasili Arkhipov, disagreed, preventing war. Putting all these events together, JFK later estimated that the chances of nuclear war were “between one in three and even”.13 There have been plenty of other close calls with Russia, even after the Cold War, as listed on this nice Wikipedia page. And those are just the ones we know about. Nuclear experts today are just as concerned about tensions between India and Pakistan, which both possess nuclear weapons, as North Korea.14 The key problem is that several countries maintain large nuclear arsenals that are ready to be deployed in minutes. This means that a false alarm or accident can rapidly escalate into a full-blown nuclear war, especially in times of tense foreign relations. Would a nuclear war end civilisation? It was initially thought that a nuclear blast might be so hot that it would ignite the atmosphere and make the Earth uninhabitable. Scientists estimated this was sufficiently unlikely that the weapons could be “safely” tested, and we now know this won’t happen. In the 1980s, the concern was that ash from burning buildings would plunge the Earth into a long-term winter that would make it impossible to grow crops for decades.15 Modern climate models suggest that a nuclear winter severe enough to kill everyone is very unlikely, though it’s hard to be confident due to model uncertainty.16 Even a “mild” nuclear winter, however, could still cause mass starvation.17 For this and other reasons, a nuclear war would be extremely destabilising, and it’s unclear whether civilisation could recover. How likely is a nuclear war to permanently end civilisation? It’s very hard to estimate, but it seems hard to conclude that the chance of a civilisation-ending nuclear war in the next century isn’t over 0.3%. That would mean the risks from nuclear weapons are greater than all the natural risks put together. (Read more about nuclear risks.) This is why the 1950s marked the start of a new age for humanity. For the first time in history, it became possible for a small number of decision-makers to wreak havoc on the whole world. We now pose the greatest threat to our own survival — that makes today the most dangerous point in human history. And nuclear weapons aren’t the only way we could end civilisation. How big is the risk of run-away climate change? In 2015, President Obama said in his State of the Union address that:18 “No challenge  poses a greater threat to future generations than climate change” Climate change is certainly a major risk to civilisation. The graph below shows estimates of climate sensitivity. Climate sensitivity is how much warming to expect in the long-term if CO2 concentrations double, which is roughly what’s expected within the century. The most likely outcome is 2-4 degrees of warming, which would be bad, but survivable. However, these estimates give a 10% chance of warming over 6 degrees, and perhaps a 1% chance of warming of 9 degrees. That would render large fractions of the Earth functionally uninhabitable, requiring at least a massive reorganisation of society. It would also probably increase conflict, and make us more vulnerable to other risks. (If you’re sceptical of climate models, then you should increase your uncertainty, which makes the situation more worrying.) So, it seems like the chance of a massive climate disaster created by CO2 is perhaps similar to the chance of a nuclear war. Researchers who study these issues think nuclear war seems more likely to result in outright extinction, due to the possibility of nuclear winter, which is why we think nuclear weapons pose an even greater risk than climate change. That said, climate change is certainly a major problem, which should raise our estimate of the risks even higher. (Read more about run-away climate change.) What new technologies might be as dangerous as nuclear weapons? The invention of nuclear weapons led to the anti-nuclear movement just a decade later in the 1960s, and the environmentalist movement soon adopted the cause of fighting climate change. What’s less appreciated is that new technologies will present further catastrophic risks. This is why we need a movement that is concerned with safeguarding civilisation in general. Predicting the future of technology is difficult, but because we only have one civilisation, we need to try our best. Here are some candidates for the next technology that’s as dangerous as nuclear weapons. In 1918-1919, over 3% of the world’s population died of the Spanish Flu.19 If such a pandemic arose today, it might be even harder to contain due to rapid global transport. What’s more concerning, though, is that it may soon be possible to genetically engineer a virus that’s as contagious as the Spanish Flu, but also deadlier, and which could spread for years undetected. That would be a weapon with the destructive power of nuclear weapons, but far harder to prevent from being used. Nuclear weapons require huge factories and rare materials to make, which makes them relatively easy to control. Designer viruses might be possible to create in a lab with a couple of biology PhDs. In fact, in 2006, The Guardian was able to order segments of the extinct smallpox virus by mail order.20 Some terrorist groups have expressed interest in using indiscriminate weapons like these. (Read more about pandemic risks.) Another new technology with huge potential power is artificial intelligence. The reason that humans are in charge and not chimps is purely a matter of intelligence. Our large and powerful brains give us incredible control of the world, despite the fact that we are so much physically weaker than chimpanzees. So then what would happen if one day we created something much more intelligent than ourselves? In 2017, 350 researchers who have published peer-reviewed research into artificial intelligence at top conferences were polled about when they believe that we will develop computers with human-level intelligence: that is, a machine that is capable of carrying out all work tasks better than humans. The median estimate was that there is a 50% chance we will develop high-level machine intelligence in 45 years, and 75% by the end of the century.21 These probabilities are hard to estimate, and the researchers gave very different figures depending on precisely how you ask the question.22 Nevertheless, it seems there is at least a reasonable chance that some kind of transformative machine intelligence is invented in the next century. Moreover, greater uncertainty means means that it might come sooner than people think rather than later. What risks might this development pose? The original pioneers in computing, like Alan Turing and Marvin Minsky, raised concerns about the risks of powerful computer systems,23 and these risks are still around today. We’re not talking about computers “turning evil”. Rather, one concern is that a powerful AI system could be used by one group to gain control of the world, or otherwise be mis-used. If the USSR had developed nuclear weapons 10 years before the USA, the USSR might have become the dominant global power. Powerful computer technology might pose similar risks. Another concern is that deploying the system could have unintended consequences, since it would be difficult to predict what something smarter than us would do. A sufficiently powerful system might also be difficult to control, and so be hard to reverse once implemented. These concerns have been documented by Oxford Professor Nick Bostrom in Superintelligence and by AI pioneer Stuart Russell. Most experts think that better AI will be a hugely positive development, but they also agree there are risks. In the survey we just mentioned, AI experts estimated that the development of high-level machine intelligence has a 10% chance of a “bad outcome” and a 5% chance of an “extremely bad” outcome, such as human extinction.21 And we should probably expect this group to be positively biased, since, after all, they make their living from the technology. Putting the estimates together, if there’s a 75% chance that high-level machine intelligence is developed in the next century, then this means that the chance of a major AI disaster is 5% of 75%, which is about 4%. (Read more about risks from artificial intelligence.) People have raised concern about other new technologies, such as other forms of geo-engineering and atomic manufacturing, but they seem significantly less imminent, so are widely seen as less dangerous than the other technologies we’ve covered. You can see a longer list of extinction risks here. What’s probably more concerning is the risks we haven’t thought of yet. If you had asked people in 1900 what the greatest risks to civilisation were, they probably wouldn’t have suggested nuclear weapons, genetic engineering or artificial intelligence, since none of these were yet invented. It’s possible we’re in the same situation looking forward to the next century. Future “unknown unknowns” might pose a greater risk than the risks we know today. Each time we discover a new technology, it’s a little like betting against a single number on a roulette wheel. Most of the time we win, and the technology is overall good. But each time there’s also a small chance the technology gives us more destructive power than we can handle, and we lose everything. If we add everything together, what’s the total risk? Many experts who study these issues estimate that the total chance of human extinction in the next century is between 1 and 20%. For instance, an informal poll in 2008 at a conference on catastrophic risks found they believe it’s pretty likely we’ll face a catastrophe that kills over a billion people, and estimate a 19% chance of extinction before 2100.24

|  |  |  |
| --- | --- | --- |
| Risk | At least 1 billion T dead | Human  extinction T |
| Number killed by molecular nanotech weapons. | 10% | 5% |
| Total killed by superintelligent Al. | 5% | 5% |
| Total killed in all wars (including civil wars). | 30% | 4% |
| Number killed in the single biggest engineered pandemic. | 10% | 2% |
| Total killed in all nuclear wars. | 10% | 1% |
| Number killed in the single biggest nanotech accident. | 1% | 0.5% |
| Number killed in the single biggest natural pandemic. | 5% | 0.05% |
| Total killed in all acts of nuclear terrorism. | 1% | 0.03% |
| Overall risk of extinction prior to 2100 | n/a | 19% |

Dr. Toby Ord, who is writing a book on this topic, puts the risk in the next century at 1 in 6 — the roll of a dice. These figures are about one million times higher than what people normally think. What should we make of these estimates? Presumably, the researchers only work on these issues because they think they’re so important, so we should expect their estimates to be high (“selection bias”). But does that mean we can dismiss their concerns entirely? Given this, what’s our personal best guess? It’s very hard to say, but we find it hard to confidently ignore the risks. Overall, we think the risk is likely over 3%. Why helping to safeguard the future could be the most important thing you can do with your life How much should we prioritise working to reduce these risks compared to other issues, like global poverty, ending cancer or political change? At 80,000 Hours, we do research to help people find careers with positive social impact. As part of this, we try to find the most urgent problems in the world to work on. We evaluate different global problems using our problem framework, which compares problems in terms of: Scale – how many are affected by the problem Neglectedness -how many people are working on it already Solvability – how easy it is to make progress If you apply this framework, we think that safeguarding the future comes out as the world’s biggest priority. And so, if you want to have a big positive impact with your career, this is the top area to focus on. In the next few sections, we’ll evaluate this issue on scale, neglectedness and solvability, drawing heavily on Existential Risk Prevention as a Global Priority by Nick Bostrom and unpublished work by Toby Ord, as well as our own research. First, let’s start with the scale of the issue. We’ve argued there’s likely over a 3% chance of extinction in the next century. How big an issue is this? One figure we can look at is how many people might die in such a catastrophe. The population of the Earth in the middle of the century will be about 10 billion, so a 3% chance of everyone dying means the expected number of deaths is about 300 million. This is probably more deaths than we can expect over the next century due to the diseases of poverty, like malaria.25 Many of the risks we’ve covered could also cause a “medium” catastrophe rather than one that ends civilisation, and this is presumably significantly more likely. The survey we covered earlier suggested over a 10% chance of a catastrophe that kills over 1 billion people in the next century, which would be at least another 100 million deaths in expectation, along with far more suffering among those who survive. So, even if we only focus on the impact on the present generation, these catastrophic risks are one of the most serious issues facing humanity. But this is a huge underestimate of the scale of the problem, because if civilisation ends, then we give up our entire future too. Most people want to leave a better world for their grandchildren, and most also think we should have some concern for future generations more broadly. There could be many more people having great lives in the future than there are people alive today, and we should have some concern for their interests. There’s a possibility the human civilization could last for millions of years, so when we consider the impact of the risks on future generations, the stakes are millions of times higher – for good or evil. As Carl Sagan wrote on the costs of nuclear war in Foreign Affairs: A nuclear war imperils all of our descendants, for as long as there will be humans. Even if the population remains static, with an average lifetime of the order of 100 years, over a typical time period for the biological evolution of a successful species (roughly ten million years), we are talking about some 500 trillion people yet to come. By this criterion, the stakes are one million times greater for extinction **than for** the more modest nuclear wars that kill “only” hundreds of **millions of people**. There are many other possible measures of the potential loss–including culture and science, the evolutionary history of the planet, and the significance of the lives of all of our ancestors who contributed to the future of their descendants. Extinction is the undoing of the human enterprise. We’re glad the Romans didn’t let humanity go extinct, since it means that all of modern civilisation has been able to exist. We think we owe a similar responsibility to the people who will come after us, assuming (as we believe) that they are likely to lead fulfilling lives. It would be reckless and unjust to endanger their existence just to make ourselves better off in the short-term. It’s not just that there might be more people in the future. As Sagan also pointed out, no matter what you think is of value, there is potentially a lot more of it in the future. Future civilisation could create a world without need or want, and make mindblowing intellectual and artistic achievements. We could build a far more just and virtuous society. And there’s no in-principle reason why civilisation couldn’t reach other planets, of which there are some 100 billion in our galaxy.26 If we let civilisation end, then none of this can ever happen. We’re unsure whether this great future will really happen, but that’s all the more reason to keep civilisation going so we have a chance to find out. Failing to pass on the torch to the next generation might be the worst thing we could ever do. So, a couple of percent risk that civilisation ends seems likely to be the biggest issue facing the world today. What’s also striking is just how neglected these risks are. Why these risks are some of the most neglected global issues Here is how much money per year goes into some important causes:27 As you can see, we spend a vast amount of resources on R&D to develop even more powerful technology. We also expend a lot in a (possibly misguided) attempt to improve our lives by buying luxury goods. Far less is spent mitigating catastrophic risks from climate change. Welfare spending in the US alone dwarfs global spending on climate change. But climate change still receives enormous amounts of money compared to some of these other risks we’ve covered. We roughly estimate that the prevention of extreme global pandemics receives under 300 times less, even though the size of the risk seems about the same. Research to avoid accidents from AI systems is the most neglected of all, perhaps receiving 100-times fewer resources again, at around only $10m per year. You’d find a similar picture if you looked at the number of people working on these risks rather than money spent, but it’s easier to get figures for money. If we look at scientific attention instead, we see a similar picture of neglect (though, some of the individual risks receive significant attention, such as climate change): Our impression is that if you look at political attention, you’d find a similar picture to the funding figures. An overwhelming amount of political attention goes on concrete issues that help the present generation in the short-term, since that’s what gets votes. Catastrophic risks are far more neglected. Then, among the catastrophic risks, climate change gets the most attention, while issues like pandemics and AI are the most neglected. This neglect in resources, scientific study and political attention is exactly what you’d expect to happen from the underlying economics, and are why the area presents an opportunity for people who want to make the world a better place. First, these risks aren’t the responsibility of any single nation. Suppose the US invested heavily to prevent climate change. This benefits everyone in the world, but only about 5% of the world’s population lives in the US, so US citizens would only receive 5% of the benefits of this spending. This means the US will dramatically underinvest in these efforts compared to how much they’re worth to the world. And the same is true of every other country. This could be solved if we could all coordinate — if every nation agreed to contribute its fair share to reducing climate change, then all nations would benefit by avoiding its worst effects. Unfortunately, from the perspective of each individual nation, it’s better if every other country reduces their emissions, while leaving their own economy unhampered. So, there’s an incentive for each nation to defect from climate agreements, and this is why so little progress gets made (it’s a prisoner’s dilemma). And in fact, this dramatically understates the problem. The greatest beneficiaries of efforts to reduce catastrophic risks are future generations. They have no way to stand up for their interests, whether economically or politically. If future generations could vote in our elections, then they’d vote overwhelmingly in favour of safer policies. Likewise, if future generations could send money back in time, they’d be willing to pay us huge amounts of money to reduce these risks. (Technically, reducing these risks creates a trans-generational, global public good, which should make them among the most neglected ways to do good.) Our current system does a poor job of protecting future generations. We know people who have spoken to top government officials in the UK, and many want to do something about these risks, but they say the pressures of the news and election cycle make it hard to focus on them. In most countries, there is no government agency that naturally has mitigation of these risks in its remit. This is a depressing situation, but it’s also an opportunity. For people who do want to make the world a better place, this lack of attention means there are lots high-impact ways to help. What can be done about these risks? We’ve covered the scale and neglectedness of these issues, but what about the third element of our framework, solvability? It’s less certain that we can make progress on these issues than more conventional areas like global health. It’s much easier to measure our impact on health (at least in the short-run) and we have decades of evidence on what works. This means working to reduce catastrophic risks looks worse on solvability. However, there is still much we can do, and given the huge scale and neglectedness of these risks, they still seem like the most urgent issues. We’ll sketch out some ways to reduce these risks, divided into three broad categories: 1. Targeted efforts to reduce specific risks One approach is to address each risk directly. There are many concrete proposals for dealing with each, such as the following: Many experts agree that better disease surveillance would reduce the risk of pandemics. This could involve improved technology or better collection and aggregation of existing data, to help us spot new pandemics faster. And the faster you can spot a new pandemic, the easier it is to manage. There are many ways to reduce climate change, such as helping to develop better solar panels, or introducing a carbon tax. With AI, we can do research into the “control problem” within computer science, to reduce the chance of unintended damage from powerful AI systems. A recent paper, Concrete problems in AI safety, outlines some specific topics, but only about 20 people work full-time on similar research today. In nuclear security, many experts think that the deterrence benefits of nuclear weapons could be maintained with far smaller stockpiles. But, lower stockpiles would also reduce the risks of accidents, as well as the chance that a nuclear war, if it occurred, would end civilisation. We go into more depth on what you can do to tackle each risk within our problem profiles: AI safety Pandemic prevention Nuclear security Run-away climate change We don’t focus on naturally caused risks in this section, because they’re much less likely and we’re already doing a lot to deal with some of them. Improved wealth and technology makes us more resilient to natural risks, and a huge amount of effort already goes into getting more of these. 2. Broad efforts to reduce risks Rather than try to reduce each risk individually, we can try to make civilisation generally better at managing them. The “broad” efforts help to reduce all the threats at once, even those we haven’t thought of yet. For instance, there are key decision-makers, often in government, who will need to manage these risks as they arise. If we could improve the decision-making ability of these people and institutions, then it would help to make society in general more resilient, and solve many other problems. Recent research has uncovered lots of ways to improve decision-making, but most of it hasn’t yet been implemented. At the same time, few people are working on the issue. We go into more depth in our write-up of improving institutional decision-making. Another example is that we could try to make it easier for civilisation to rebound from a catastrophe. The Global Seed Vault is a frozen vault in the Arctic, which contains the seeds of many important crop varieties, reducing the chance we lose an important species. Melting water recently entered the tunnel leading to the vault due, ironically, to climate change, so could probably use more funding. There are lots of other projects like this we could do to preserve knowledge. Similarly, we could create better disaster shelters, which would reduce the chance of extinction from pandemics, nuclear winter and asteroids (though not AI), while also increasing the chance of a recovery after a disaster. Right now, these measures don’t seem as effective as reducing the risks in the first place, but they still help. A more neglected, and perhaps much cheaper option is to create alternative food sources, such as those that be produced without light, and could be quickly scaled up in a prolonged winter. Since broad efforts help even if we’re not sure about the details of the risks, they’re more attractive the more uncertain you are. As you get closer to the risks, you should gradually reallocate resources from broad to targeted efforts (read more). We expect there are many more promising broad interventions, but it’s an area where little research has been done. For instance, another approach could involve improving international coordination. Since these risks are caused by humanity, they can be prevented by humanity, but what stops us is the difficulty of coordination. For instance, Russia doesn’t want to disarm because it would put it at a disadvantage compared to the US, and vice versa, even though both countries would be better off if there were no possibility of nuclear war. However, it might be possible to improve our ability to coordinate as a civilisation, such as by improving foreign relations or developing better international institutions. We’re keen to see more research into these kinds of proposals. Mainstream efforts to do good like improving education and international development can also help to make society more resilient and wise, and so also contribute to reducing catastrophic risks. For instance, a better educated population would probably elect more enlightened leaders (cough). Richer countries are better able to prevent pandemics — it’s no accident that Ebola took hold in some of the poorest parts of West Africa. But, we don’t see education and health as the best areas to focus on for two reasons. First, these areas are far less neglected than the more unconventional approaches we’ve covered. In fact, improving education is perhaps the most popular cause for people who want to do good, and in the US alone, receives 800 billion dollars of government funding, and another trillion dollars of private funding. Second, these approaches have much more diffuse effects on reducing these risks — you’d have to improve education on a very large scale to have any noticeable effect. We prefer to focus on more targeted and neglected solutions. 3. Learning more and building capacity We’re highly uncertain about which risks are biggest, what is best to do about them, and whether our whole picture of global priorities might be totally wrong. This means that another key goal is to learn more about all of these issues. We can learn more by simply trying to reduce these risks and seeing what progress can be made. However, we think the most neglected and important way to learn more right now is to do “global priorities research”. This is a combination of economics and moral philosophy, which aims to answer high-level questions about the most important issues for humanity. There are only a handful of researchers working full-time on these issues. Another way to handle uncertainty is to build up resources that can be deployed in the future when you have more information. One way of doing this is to earn and save money. You can also invest in your career capital, especially your transferable skills and influential connections, so that you can achieve more in the future. However, we think that a potentially better approach than either of these is to build a high-quality community that’s focused on reducing these risks, whatever they turn out to be. The reason this can be better is that it’s possible to grow the capacity of a community faster than you can grow your individual wealth or career capital. For instance, if you spent a year doing targeted one-on-one outreach, it’s not out of the question to find one other person with relevant expertise to join you. This would be an annual return to the cause of about 100%. Right now, we are focused on building the effective altruism community, which contains many people who want to reduce these risks. Moreover, the recent rate of growth, and studies of specific efforts to grow the community, suggest that high rates of return are possible. However, we expect that other community building efforts will also be valuable. It would be great to see a community of scientists trying to promote a culture of safety in academia. It would be great to see a community of policymakers who want to try to reduce these risks, and make government have more concern for future generations. Given how few people actively work on reducing these risks, we expect that there’s a lot that could be done to build a movement around them. In total, how effective is it to reduce these risks? Considering all the approaches to reducing these risks, and how few resources are devoted to some of them, it seems like substantial progress is possible. In fact, even if we only consider the impact of these risks on the present generation (ignoring any benefits to future generations), they’re plausibly the top priority. Here are some very rough and simplified figures to show how this could be possible. It seems plausible to us that $100 billion spent on reducing extinction risk could reduce it by over 1% over the next century. A one percentage point reduction in the risk would be expected to save about 100 million lives among the present generation (1% of about 10 billion people alive today). This would mean the investment would save lives for only $1000 per person. Greg Lewis has made a more detailed estimate, arriving at a mean of $9200 per life saved in the present generation.28 There are also more estimates in the thread. We think Greg is likely too conservative, because he assumes the risk of extinction is only 1% over the next century, when our estimate is that it’s several times higher. We also think the next billion dollars spent on reducing extinction risk could cause a larger reduction in the risk than Greg assumes (note that this is only true if the billion were spent on the most neglected issues like AI safety and biorisk, rather than climate change which already receives hundreds of billions of dollars of investment). We wouldn’t be surprised if the cost per present lives saved for the next one billion dollars invested in reducing extinction risk were under $100. GiveWell’s top recommended charity, Against Malaria Foundation (AMF), is often presented as one of the best ways to help the present generation and saves lives for around $7500 (2017 figures).29 So these estimates would put extinction risk reduction as better or in the same ballpark cost-effectiveness as AMF for saving lives in the present generation — a charity that was specifically selected for being outstanding on that dimension. Likewise, we think that if 10,000 talented young people focused their careers on these risks, they could achieve something like a 1% reduction in the risks. That would mean that each person would save 1000 lives over their careers in the present generation, which is probably better than what they could save by earning to give and donating to The Against Malaria Foundation.30 In one sense, these are unfair comparisons, because GiveWell’s estimate is far more solid and well-researched, whereas our estimate is more of an informed guess. There may also be better ways to help the present generation than AMF (e.g. policy advocacy). However, we’ve also dramatically understated the benefits of reducing extinction risks. The main reason to safeguard civilisation is not to benefit the present generation, but to benefit future generations. We ignored them in this estimate. If we also consider future generations, then the effectiveness of reducing extinction risks is orders of magnitude higher, and it’s hard to imagine a more urgent priority right now. Now you can either read some responses to these arguments, or skip ahead to practical ways to contribute. Who shouldn’t prioritise safeguarding the future? The arguments presented rest on some assumptions that not everyone will accept. Here we present some of the better responses to these arguments. You need to focus more on your friends and family We’re only talking about what the priority should be if you are trying to help people in general, treating everyone’s interests as equal (what philosophers sometimes call “impartial altruism”). Most people care about helping others to some degree: if you can help a stranger with little cost, that’s a good thing to do. People also care about making their own lives go well, and looking after their friends and family, and we’re the same. How to balance these priorities is a difficult question. If you’re in the fortunate position to be able to contribute to helping the world, then we think safeguarding the future should be where to focus. We list concrete ways to get involved in the next section. Otherwise, you might need to focus on your personal life right now, contributing on the side, or in the future. You think the risks are much lower than we’ve argued We don’t have robust estimates of many of the human-caused risks, so you could try to make your own estimates and conclude that they’re much lower than we’ve made out. If they were sufficiently low, then reducing them would cease to be the top priority. We don’t find this plausible for the reasons covered. If you consider all the potential risks, it seems hard to be confident they’re under 1% over the century, and even a 1% risk probably warrants much more action than we currently see. You think there’s almost nothing more we can do about the risks We rate these risks as less “solvable” than issues like global health, so expect progress to be harder per dollar. That said, we think their scale and neglectedness more than makes up for this, and so they end up more effective in expectation. Many people think effective altruism is about only supporting “proven” interventions, but that’s a myth. It’s worth taking interventions that only have a small chance of paying off, if the upside is high enough. The leading funder in the community now advocates an approach of “hits-based giving”. However, if you were much more pessimistic about the chances of progress than us, then it might be better to work on more conventional issues, such as global health. Personally, we might switch to a different issue if there were two orders of magnitude more resources invested in reducing these risks. But that’s a long way off from today. A related response is that we’re already taking the best interventions to reduce these risks. This would mean that the risks don’t warrant a change in practical priorities. For instance, we mentioned earlier that education probably helps to reduce the risks. If you thought education was the best response (perhaps because you’re very uncertain which risks will be most urgent), then because we already invest a huge amount in education, you might think the situation is already handled. We don’t find this plausible because, as listed, there are lots of untaken opportunities to reduce these risks that seem more targeted and neglected. Another example like this is that economists sometimes claim that we should just focus on economic growth, since that will put us in the best possible position to handle the risks in the future. We don’t find this plausible because some types of economic growth increase the risks (e.g. the discovery of new weapons), so it’s unclear that economic growth is a top way to reduce the risks. Instead, we’d at least focus on differential technological development, or the other more targeted efforts listed above. You think there’s a better way of helping the future Although reducing these risks is worth it for the present generation, much of their importance comes from their long-term effects — once civilisation ends, we give up the entire future. You might think there are other actions the present generation could take that would have very long-term effects, and these could be similarly important to reducing the risk of extinction. In particular, we might be able to improve the quality of the future by preventing our civilization from getting locked into bad outcomes permanently. This is going to get a bit sci-fi, but bear with us. One possibility that has been floated is that new technology, like extreme surveillance or psychological conditioning, could make it possible to create a totalitarian government that could never be ended. This would be the 1984 and Brave New World scenario respectively. If this government were bad, then civilisation might have a fate worse than extinction by causing us to suffer for millennia. Others have raised the concern that the development of advanced AI systems could cause terrible harm if it is done irresponsibly, perhaps because there is a conflict between several groups raising to develop the technology. In particular, if at some point in the future, developing these systems involves the creation of sentient digital minds, their wellbeing could become incredibly important. Risks of a future that contains an astronomical amount of suffering have been called “s-risks”.31 If there is something we can do today to prevent an s-risk from happening (for instance, through targeted research in technical AI safety and AI governance), it could be even more important. Another area to look is major technological transitions. We’ve mentioned the dangers of genetic engineering and artificial intelligence in this piece, but these technologies could also create a second industrial revolution and do a huge amount of good once deployed. There might be things we can do to increase the likelihood of a good transition, rather than decrease the risk of a bad transition. This has been called trying to increase “existential hope” rather than decrease “existential risk”.32 We agree that there might be other ways that we can have very long-term effects, and these might be more pressing than reducing the risk of extinction. However, most of these proposals are not yet as well worked out, and we’re not sure about what to do about them. The main practical upshot of considering these other ways to impact the future, is that we think it’s even more important to positively manage the transition to new transformative technologies, like AI. It also makes us keener to see more global priorities research looking into these issues. Overall, we still think it makes sense to first focus on reducing extinction risks, and then after that, we can turn our attention to other ways to help the future. One way to help the future we don’t think is a contender is speeding it up. Some people who want to help the future focus on bringing about technological progress, like developing new vaccines, and it’s true that these create long-term benefits. However, we think what most matters from a long-term perspective is where we end up, rather than how fast we get there. Discovering a new vaccine probably means we get it earlier, rather than making it happen at all. Moreover, since technology is also the cause of many of these risks, it’s not clear how much speeding it up helps in the short-term. Speeding up progress is also far less neglected, since it benefits the present generation too. As we covered, over 1 trillion dollars is spent each year on R&D to develop new technology. So, speed-ups are both less important and less neglected. To read more about other ways of helping future generations, see Chapter 3 of On the Overwhelming Importance of Shaping the Far Future by Dr. Nick Beckstead You’re confident the future will be short or bad If you think it’s virtually guaranteed that civilisation won’t last a long time, then the value of reducing these risks is significantly reduced (though perhaps still worth taking to help the present generation). We agree there’s a significant chance civilisation ends soon (which is why this issue is so important), but we also think there’s a large enough chance that it could last a very long time, which makes the future worth fighting for. Similarly, if you think it’s likely the future will be more bad than good, then the value of reducing these risks goes down (or if we have much more obligation to reduce suffering than increase wellbeing). We don’t think this is likely, however, because people want the future to be good, so we’ll try to make it more good than bad. We also think that there has been significant moral progress over the last few centuries (due to the trends noted earlier), and we’re optimistic this will continue. See more discussion in footnote 11.11 What’s more, even if you’re not sure how good the future will be, or suspect it will be bad in ways we may be able to prevent in the future, you may want civilisation to survive and keep its options open. People in the future will have much more time to study whether it’s desirable for civilisation to expand, stay the same size, or shrink. If you think there’s a good chance we will be able to act on those moral concerns, that’s a good reason to leave any final decisions to the wisdom of future generations. Overall, we’re highly uncertain about these big-picture questions, but that generally makes us more concerned to avoid making any irreversible commitments.33 Beyond that, you should likely put your attention into ways to decrease the chance that the future will be bad, such as avoiding s-risks. You’re confident we have much stronger moral obligations to help the present generation If you think we have much stronger obligations to the present generation than future generations (such as person-affecting views of ethics), then the importance of reducing these risks would go down. Personally, we don’t think these views are particularly compelling. That said, we’ve argued that even if you ignore future generations, these risks seem worth addressing. The efforts suggested could still save the lives of the present generation relatively cheaply, and they could avoid lots of suffering from medium-sized disasters. What’s more, if you’re uncertain about whether we have moral obligations to future generations, then you should again try to keep your options open, and that means safeguarding civilisation. Nevertheless, if you combined the view that we don’t have large obligations to future generations with the position that the risks are also relatively unsolvable, or that there is no useful research to be done, then another way to help present generations could come out on top. This might mean working on global health, mental health or speeding up technology. Alternatively, you might think there’s another moral issue that’s more important, such as factory farming. What can you do to help? Some areas to focus on Our best evidence suggests that we’re the only intelligent life in the observable universe.34 Might we be the generation that extinguishes this life, and leaves the universe barren for the rest of eternity? Let’s see how you can help avoid that.

#### Only unipolarity can explain post WWII peace --- The US led world order is the most peaceful in history

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.

#### Unipolarity solves interventions by providing the US with the freedom of action to avoid ill-advised fights. BUT retrenchment causes prolif of proxy conflicts and adventurism.

Noel Thomas Anderson 19. Assistant professor in the Department of Political Science at the University of Toronto. “Competitive Intervention, Protracted Conflict, and the Global Prevalence of Civil War.” International Studies Quarterly 63(3): 692-706.

Systemic Dimensions: The Varying Prevalence of Competitive Intervention The framework articulated above not only provides a comprehensive account of the duration effects of competitive intervention on civil wars—it also highlights a candidate explanation for the recent decline in the prevalence of intrastate conflict. Insofar as state decisions to aid combatants are consistent with competitive state policy-making, temporal variation in geopolitical competition between states should affect trends in the prevalence of competitive intervention. Variation in the prevalence of competitive intervention should in turn affect temporal trends in the prevalence of internal conflict through the duration effects described above. Consider the pervasiveness of US-Soviet competition during the Cold War. Bipolarity extended the geographic scope of concern and broadened the range of factors included in the competition between the superpowers. American and Soviet leaders worried that challenges to the existing distribution of power might raise doubts about the credibility of their alliance commitments, thereby encouraging their allies to drift toward neutrality or, worse still, switch sides (Hironaka 2005, 107–11). Because challenges to the status quo were perceived to threaten the relative balance of power and credibility, they were resisted. Yet, because any action by one superpower was perceived as an attempt to gain a geostrategic advantage, it demanded a response. The end result was a proliferation of US-Soviet competitive intervention, wherein the superpowers committed resources to opposing government and rebel forces fighting on the periphery of their spheres of influence. That many civil wars during the Cold War were superpower proxy wars is a well-rehearsed perspective, but what is missing from existing accounts is an explanation for why superpower sponsorship should be associated with longer conflicts. If foreign civil wars played such a key role in the larger Cold War struggle, why did the superpowers not do what was necessary to help their respective sides win? The theory outlined above provides an answer: challenges to the relative balance of power and credibility necessitated reflexive responses, but the impossible stakes of direct confrontation advised caution. While the superpowers were compelled to intervene, they were simultaneously—and paradoxically—compelled to do so with restraint. Superpower rivalry also had secondary duration effects. Constrained by the need to both deter and avoid direct confrontation, Washington and Moscow employed indirect strategies for projecting power. Military aid was an integral element of their competition for influence, and accordingly, money and weapons diffused not only to civil wars, but across the international system. This assistance empowered client states, providing a set of Cold War framings and superpower arms that could be used to justify and implement independent foreign policy objectives. Notably, the superpowers struggled to control their clients’ adventurism; by exploiting fears of defection to the opposing bloc, clients found ways to commandeer superpower aid for their own self-interested ends (Krause 1991). The net result was a proliferation of interventions by otherwise weak states in civil wars across the globe. In the post–Cold War period, by contrast, state clients have a harder time garnering American aid. Regional powers continue to intervene in civil wars, but they can no longer rely on the reflexive support of the USSR when conflicts of interest arise vis-à-vis US policy, nor can they threaten defection to the Soviet-bloc in the face of American sanction. In the unipolar period, the United States has greater choice in which state clients it chooses to support, enjoys greater flexibility to discipline adventurism by weaker powers, and maintains “command of the commons” to restrict flows of economic and military aid around the globe (Posen 2003). Together, these features of the unipolar system constrain foreign adventurism by lesser powers relative to the Cold War period, thereby reducing—though not eliminating—the prevalence of competitive interventions among neighboring states and regional rivals. In this way, the transition from a bipolar to unipolar system not only terminated superpower proxy warfare, but also decreased the rate of competitive intervention by lesser powers.

#### Reject outdated primacy bad evidence --- The era of liberal hegemony is over in favor of pragmatic restraint

\*Their evidence will be based on interventions undertaken during the era of liberal hegemony --- That era has been ended in favor of a focus on national security instead of humanitarian interventions

Shifrinson and Wertheim, 21 (Joshua Shifrinson and Stephen Wertheim, Associate Professor of International Relations at Boston University , Senior Fellow in the American Statecraft Program at the Carnegie Endowment for International Peace , 9-9-2021, accessed on 12-18-2021, Outline, "**Biden the Realist**", <https://outline.com/JSjh3z)//Babcii>

But Biden’s decision to terminate the U.S. war in **Afghanistan** has revealed another side of the United States’ 46th president. In ending the two-decades-long war, Biden **rejected every “liberal internationalist” premise** of the enterprise, including the notion that building a democratic Afghanistan and transforming the region served U.S. interests or advanced universal values. He repeatedly argued that the United States had only one valid reason to use force there: to “get the terrorists who attacked us on 9/11” and might attack again. Once that objective had been achieved, the United States had no business waging war. It was for “the Afghan people alone to decide their future,” he said, including whether they would live in a Western-style democracy or under Taliban rule. The Taliban’s swift takeover, far from changing Biden’s mind, seems to have only affirmed his views about the limits of U.S. military power—in Afghanistan and elsewhere. Ending the war was “about ending an era of major military operations to remake other countries,” he said after the last U.S. soldier left Afghanistan. All this might surprise those who detect a “Biden doctrine” aiming to assert American power and defend democracy across the globe. Yet the Biden who terminated the United States’ longest war has been hiding in plain sight. Throughout his career, Biden has put the pragmatic pursuit of national security over foreign policy **orthodoxy**. For more than a decade, that calculus has made him a critic of regime-change wars and other efforts to promote American values by military force. Although his predecessor, Donald Trump, [gave voice](https://www.foreignaffairs.com/articles/2018-03-05/world-after-trump) to similar impulses, it is Biden who offers **a** more **coherent version of pragmatic realism**—a mode of thought that prizes the advancement of tangible U.S. interests, expects other states to follow their own interests, and changes course to get what the United States needs in a competitive world. If Biden continues to apply this vision, he will deliver a welcome change from decades of **overassertive** U.S. **foreign policy** [that has squandered](https://www.foreignaffairs.com/articles/2019-10-14/demolition-us-diplomacy) lives and resources in pursuit of unachievable goals. LEARNING FROM EXPERIENCE Since entering the Senate in 1973, Biden has stood out for adapting his foreign policy views to changing domestic and international circumstances. He struck a moderate line early in his national political career when confronted with Americans’ weariness with the war in Vietnam in the 1970s and mounting tensions with the Soviet Union in the 1980s. He opposed sending additional military aid to South Vietnam in 1975 as North Vietnam launched its final offensive. And when President Ronald Reagan launched a massive military buildup to increase pressure on the Soviet Union, he voted against many of the administration’s top priorities. Notably, Biden voted against the 1991 Gulf War against Iraq. “What vital interests of the United States justify sending Americans to their deaths in the sands of Saudi Arabia?” he asked. He also worried that U.S. troops would unfairly shoulder most of the casualties and that “the enmity of the Arab world” would be directed toward the United States. Biden’s views shifted, however, after the Soviet Union collapsed and the United States attained unipolar dominance. As the ranking Democrat on the Senate Foreign Relations Committee, Biden emerged as a leading proponent of enlarging NATO—a policy that created new, open-ended security commitments for the United States at the time when the “vital interests” involved were highly debatable. He contended that enlargement would guarantee “another 50 years of peace” in Europe as well as redress the “historical injustice” of Stalinist domination in Eastern Europe. Recanting his opposition to the earlier Gulf War, Biden championed U.S.-led military intervention against Serbia in the Bosnian war and the Kosovo crisis. After the 9/11 attacks, Biden voted to authorize the war in Afghanistan and, with some reservations, the war in Iraq. One week into the United States’ “shock and awe” campaign, he expressed hope that the invasion would “put Iraq on the path to a pluralistic and democratic society.” Yet once the wars faltered, Biden adapted again. In the face of insurgencies in Afghanistan and Iraq, he grew skeptical of both U.S. state-building missions. In 2006, Biden put forward his most distinctive foreign policy proposal to that point: he advocated dividing Iraq into a federal system along sectarian lines, paving the way for the U.S. military’s withdrawal from the country. Without acquiring an antiwar reputation, Biden was looking for an exit from Iraq. Accordingly, he bluntly opposed the U.S. “surge” of troops into Iraq when it was first floated in 2006, describing it as “the absolute wrong strategy.” Biden has consistently put the pragmatic pursuit of U.S. national security over foreign policy orthodoxy. Biden’s opposition to large wars with inflated goals only deepened as vice president. He was nearly alone among President Barack Obama’s senior advisers in dissenting from the administration’s decision to surge U.S. forces into Afghanistan from 2009 to 2011. Biden reasoned that the U.S.-backed Afghan government had insuperable flaws that made a complete victory over the Taliban insurgency impossible. He instead counseled a narrow counterterrorism mission targeting al Qaeda and related groups. It is possible Biden wanted to go even further. In his diary, U.S. envoy Richard Holbrooke recounted that Biden wanted to withdraw from Afghanistan entirely. During one particularly contentious debate, Holbrooke recounted Biden yelling, “I am not sending my boy back there to risk his life on behalf of women’s rights!” Advancing liberal values at gunpoint, he explained, “just won’t work, that’s not what [U.S. troops are] there for.” Biden also appears to have been a voice of caution within the Obama administration on other foreign policy debates. He expressed concern about launching the 2011 Navy SEAL raid that ultimately killed Osama bin Laden, suggesting that the United States gather additional intelligence before taking a step that could imperil relations with Pakistan. Biden also claims to have opposed the bombing of Libya that same year. At the time, he publicly urged U.S. NATO allies to take over the mission from the United States. “We can’t do it all,” Biden said, underscoring that Libya was peripheral to “our strategic interest” in the region. To Biden’s critics, his shifts on foreign policy no doubt seem opportunistic. His supporters, meanwhile, can herald his **willingness to learn from experience**. But Biden’s trajectory from **Cold War** moderate **to liberal-hegemony** enthusiast **to nation-building skeptic** contains a through line: he has always **regarded U.S. security as the paramount basis of foreign policy**, and has been willing to reassess how to advance American interests in light of new conditions and stubborn realities. And this pragmatic realism may augur even more sweeping changes to American foreign policy now that he resides in the White House. AFTER AFGHANISTAN Afghanistan represents the starkest example of Biden’s pragmatic realist streak. He ended the war swiftly after concluding that doing so would benefit the United States, heeding the strong preference of the U.S. public and resisting pressure from the Pentagon and many foreign policy elites to renew the U.S. state-building project. In justifying his decision, Biden insisted that U.S. service members should be sent into combat only to defend the United States. As an animated Biden told an interviewer during his presidential campaign, “The responsibility I have is to protect America’s national self-interest and not put our women and men in harm’s way to try to solve every single problem in the world by use of force.” Afghanistan may be just the beginning. Biden has **ordered the Defense Department to conduct a “global posture review”** of the United States’ forward deployments. If the review acts on the insight of General Mark Milley, the chairman of the joint chiefs of staff, that many existing deployments were “developed during the Cold War,” it could recommend a significant restructuring of the U.S. military footprint. The administration has already signaled its intention to “right-size” the U.S. military presence in the Middle East and has recently begun that process by pulling antimissile systems **out of Iraq, Jordan, Kuwait,** and Saudi **Arabia**. Biden may also become the first president in three decades to **avoid the enlargement of NATO:** he has soft-pedaled talk of extending NATO membership to Ukraine, although he has continued to send military aid to the country. To be sure, Biden has often framed U.S. relations with [China](https://www.foreignaffairs.com/articles/united-states/2021-03-17/how-craft-durable-china-strategy) and [Russia](https://www.foreignaffairs.com/articles/russian-federation/2020-06-09/pinning-down-putin) in ideological terms. He has vowed to disprove the notion that “autocracy is the wave of the future” by demonstrating the continued vitality of American democratic institutions. Yet Biden’s actual policies toward the two powers betray his pragmatic bent. Rather than merge the countries into a single specter of an authoritarian menace, Biden has **prioritized competition with a rising China** well above that with a weaker Russia. He has aimed to establish a “stable and predictable relationship” with the latter, an approach that seeks to limit bilateral tensions and potentially enable the United States to focus on counterbalancing China. If Biden continues to apply this vision, he will deliver a welcome change from decades of overassertive U.S. foreign policy. As he did during the Cold War, Biden has taken steps designed to open the door to negotiated resolutions to disputes with the United States’ geopolitical rivals. He chose to hold his first major bilateral summit with Russian President Vladimir Putin and has also signaled his interest in meeting with Chinese President Xi Jinping. Diplomacy, he said after his summit with Putin, does not depend on trusting the other party. It requires merely that both sides have mutual interests and establish understandings based on those interests. “This is about self-interest and verification of self-interest,” Biden emphasized. “It’s just pure business.” At times, Biden’s own rhetoric can obscure his most distinctive foreign policy instincts. He has expressed revulsion at Trump for embracing “all the thugs in the world” and vowed that “human rights will be the center of our foreign policy”—a claim that is hard to square with his unapologetic defense of vital national interests as the sole grounds for war. And in December, he plans to hold the first of two “Summits for Democracy” intended to help the world’s democracies defend against authoritarianism and show they can deliver for their citizens. Contrasted with Trump and his affinity for autocrats, Biden may sound like he is returning to the United States’ muscular promotion of liberalism and democracy abroad. Still, most of Biden’s statements and actions are consistent with an outlook that puts national security above all other considerations. Likewise, the Summits for Democracy so far do not reflect a substantial effort either to expand U.S. alliances with democracies or to restrict U.S. alliances to liberal states. After all, pro-democracy rhetoric has not precluded the Biden administration from deepening ties with authoritarian states such as Thailand and Vietnam and increasingly illiberal democracies such as India and the Philippines. The summits may simply reflect the fact that Biden supports democracy, liberal values, and human rights—**without** thinking they should be promoted at **the point of a gun** or dictate U.S. defense obligations. **RESHAPING AMERICAN FOREIGN POLICY** If the Biden administration continues to prize pragmatic realism above liberal primacy, [far-reaching changes](https://www.foreignaffairs.com/articles/united-states/2021-02-16/present-re-creation) may be in store for U.S. foreign policy. The security-focused analysis that Biden applied to Afghanistan would also lead to force reductions elsewhere in the world. The thousands of ground troops currently in Iraq and Syria to prevent a future resurgence of the Islamic State (also known as ISIS) are an obvious place to start. Their deployment violates Biden’s stated requirement to “set missions with clear, achievable goals” because success can never be verifiably achieved.

#### An evolutionary reading of offensive realism best explains the history of state and human behavior --- Alternative explanations fail to properly facilitate cooperation and cause nuclear war

\*Johnson and Thayer reject Mearsheimer’s understanding of offensive realism as only descriptive of state behavior

Johnson and Thayer, 16 (Dominic Johnson and Bradley Thayer, Johnson, Ph.D, Department of Politics and International Relations, University of Oxford, Thayer, Ph.D Stjórnmálafræðideild/Department of Political Science, Háskóli Íslands/University of Iceland, Spr 2016, accessed on 12-7-2021, PubMed, "The evolution of offensive realism", <https://pubmed.ncbi.nlm.nih.gov/27378020/)//Babcii>

Conclusions

Offensive realism, more than other major theories of international relations, closely matches what we know about **human nature** from the evolutionary **sciences**. Reading the literature of offensive realism can be hauntingly analogous to reading ethnographies of warfare among preindustrial societies such as the Yanomamo in the Amazon, the Mae Enga in New Guinea, or the Shuar in the Andes. An evolutionary foundation offers a **major reinterpretation** of the theory of offensive realism and permits its **broader application to political behavior across a wide range of actors, domains, and historical eras.**

**\*\*Table 4 omitted\*\***

Evolutionary theory also allows realist scholars to explain the intellectual foundations of offensive realism: Why individuals and state decision-makers are **egoistic** and **strive to dominate others** when circumstances permit, and why they make strong ingroup/outgroup distinctions. These adaptations were favored by natural selection over the course of evolution and remain a significant cause of human behavior.

The fundamental differences and similarities between our theory of offensive realism and Mearsheimer’s are captured in Table 4. The abundance of intergroup **threats**, which cause the fear and uncertainty Mearsheimer identifies, are deeply rooted in human evolution under conditions of anarchy over millions of years, and **not just in the anarchy of the modern state system** in recent history. Thus, if theories of international relations are to accurately account for human nature, they must acknowledge how human behavior has been shaped by the ancestral environment, rather than (or as well as) contemporary international politics.

The optimistic message of our argument is that understanding human nature will make efforts toward international institutions, democracy, and **cooperation more effective**. Cooperation and peace efforts often **fail** precisely **because people have too rosy a view of human nature** and thus fail to structure incentives effectively. Efforts to make positive political change may be more effective if we view humans as **offensive realists** and intervene accordingly. At worst, this perspective will make us err on the side of caution.

No theory is perfect. None captures all salient issues. However, offensive realism is one of **the most compelling** current theories for explaining major phenomena across the history of international politics, such as great power rivalries and the origins of war. Part of the reason for its intuitive and explanatory success is, we suggest, its close match with human behavior. This match, in turn, should be no surprise because human behavior evolved under conditions of anarchy, which pervaded throughout our evolution as well as in international politics today. Self-help, power maximization, and fear are strategies to survive nature, not just contemporary international politics. It is also worth noting that offensive realism may often be derided because we do not want it to be true. We prefer a more positive picture of human nature, perhaps one that accords with comfortable modern life in developed states. However, **we need to see the world as it is, not as we would like it to be.** When the **stakes are high**, such as **in** 1914, 1939, 1941, or 1962, or today in the Middle East, Ukraine, or **the** East and South **China Seas**, offensive realism does not seem so foreign. Indeed, the possibility of even more intense security **competition** in the Sino-American relationship, between India and Pakistan, and in the Middle East highlights the importance of making the theory’s **logic explicit** and revealing and testing its foundations.

#### Statistical analysis proves that is especially true regarding China

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.

A close up of a map

Description automatically generated

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.

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.

#### The aff’s use of legal research and scenario planning are essential to solvency --- In depth studies and scenario analysis are critical to effective antitrust enforcement

O’Keeffe, 17 (Siún O’Keeffe, Strategy advisor, Netherlands Authority for Consumers and Markets., Nov 2017, accessed on 9-14-2021, Sci-hub, "Use and Importance of Market Studies in Modern Competition Enforcement", https://sci-hub.se/https://doi.org/10.1093/jeclap/lpx081)//babcii

Market studies too, can ultimately lead to swifter problem-solving. They allow us to examine a complicated market and establish how it works. This can prove **invaluable to assessments of whether or not particular activities are harmful**. Take the Online Hotel Booking Monitor that was published by EU competition authorities in February 2017. The Monitor examined empirical evidence that showed that many hotels were unaware of the legality or otherwise of the clauses controlling their prices. Also, it revealed no evidence of increased competition in markets where both wide and narrow across platform parity clauses were prohibited, in comparison to markets where only the wide APPA was stopped (through commitments). It is an example of crossborder number-crunching cooperation between 11 member states, including ACM, and the European Commission (in a sector in which authorities are often criticised for a lack of cooperation). ACM recently conducted an online video streaming study, with a focus on online video advertising. The study showed the intricate working of a swiftly moving multi-sided market. Online video platforms compete heavily for consumer attention. This battle primarily takes places in the fields of video-content and new service provision. The study suggested that none of the online video platforms currently has a dominant position in online advertising (it did not further explore content issues). The **large, international platforms** such as YouTube and Facebook face competition on these markets, at present, from each other and from smaller competitors. Online advertisements can be placed in a number of ways. In addition, there are many different companies that sell advertising space and place advertisements. Advertisers are able to choose the type of advertisement, and choose with whom they wish to do business, and they take advantage of these opportunities. There is also sufficient competition between the companies that facilitate the trade of advertising space. Personal data-sets are becoming more and more important in online advertising. However, the study suggested that the large data-sets of established platforms are not an insurmountable barrier for being able to enter this particular market. This study reveals a dynamic market where one player has a certain degree of market power, and **explores scenarios showing potential problems** that could arise. In-depth knowledge of how a market works allows the authority to intervene more quickly in the future, if necessary with interim measures, when a problem does arise. It allows us to combine ‘thinking fast’, with ‘thinking slow’, and it helps to waylay knee-jerk legislative reactions. Interim measures and quick interventions can be invaluable to prevent situations of harm arising. However, they do not replace empirical studies and thorough investigation based on the examination of facts and data. In the digital age, despite all the pressures, there is also a need to heed William Henry Davies’ advice to take the ‘time to stand and stare’ not in the pursuit of leisure, but rather in the pursuit of fact-based decision-making.

#### Specifically true of big tech and antitrust --- Civic monopolization means an informed public is key --- Legal engagement is essential to provide cover for political action

**Moore, 16** (Martin Moore, Moore is director of the Centre for the Study of Media Communication and Power in the Policy Institute at King’s College London. He has twenty years experience working across the UK media, in the commercial sector, the third sector and in academia. Prior to King’s he was founding director of the Media Standards Trust., Apr 2016, accessed on 9-14-2021, Kcl.ac, "Tech Giants and Civic Power", https://www.kcl.ac.uk/policy-institute/assets/cmcp/tech-giants-and-civic-power.pdf)//Babcii

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.**

#### History proves the correlation between legal engagement and effective regulation --- Past tech monopolies prove the process of the 1AC effectively garners concessions from monopolies that solve even absent antitrust

Carlsson and Swartz, 21 (Philipp Carlsson-Szlezak and Paul Swartz, Carlsson-Szlezak is a managing director and partner in BCG’s New York office and global chief economist of BCG. Paul Swartz is a director and senior economist at the BCG Henderson Institute, based in BCG’s New York office., 8-18-2021, accessed on 9-14-2021, Fortune, "Popular outrage, not economics, will determine the fate of Big Tech", <https://fortune.com/2021/08/18/big-tech-breakup-antitrust-popular-outrage-facebook-google-standard-oil-microsoft/>)//Babcii

The power of the biggest tech companies has grown too ubiquitous to ignore—their dominance can be felt in the stock indexes, in segments of the labor market, and in the oversight (or lack thereof) of public discourse, to name just a few areas of influence. Little surprise, then, that [the political script](https://fortune.com/2021/06/24/house-panel-big-tech-facebook-google/) appears to be at a turning point: Regulatory agencies, now [staffed with vocal critics of the industry](https://fortune.com/2021/06/30/ftc-chair-lina-khan-populist-antitrust-movement-what-can-she-do-federal-trade-commission/), are accelerating the pursuit, with [Facebook](https://fortune.com/company/facebook) and [Google](https://fortune.com/company/alphabet) squarely [in the crosshairs](https://fortune.com/2021/01/04/facebook-antitrust-lawsuit-ftc-entrepreneurs-innovation/) of antitrust litigation. Yet predicting Big Tech’s comeuppance could be a losing bet. The path from corporate power to regulatory backlash is neither linear nor predominantly about economics. What’s overlooked in today’s debate is the catalyzing power of popular outrage. The presence of such anger has reliably aligned political will and driven regulatory pushback in the past—and its absence has slowed or prevented such pushback. To see why the political economy of outrage will likely shape [Big Tech’s regulatory fate](https://fortune.com/tag/big-tech/), a brief tour of U.S. history is a good starting point. The legacy of Ida Tarbell The Sherman Act and the dismemberment of Standard Oil in 1911 are often invoked today to highlight regulatory risk and power. However, a more interesting question is why the Sherman Act, passed in 1890, sat idle for nearly 20 years, even as politicians watched Standard Oil’s growing abuse of its market power. What changed? What forced Teddy Roosevelt’s hand wasn’t economic benchmarks such as peaking market share or high prices. It was Ida Tarbell, a star of the emerging field of muckraker journalism, who was on a mission of personal revenge to expose the Rockefeller empire. Her [History of the Standard Oil Company](https://energyhistory.yale.edu/library-item/ida-m-tarbell-history-standard-oil-company-1904) (1904) was a bestseller, serialized in McClure’s Magazine to great effect, and successfully galvanized public opinion against the Rockefellers and their monopoly. Growing up, Tarbell had witnessed Standard Oil bullying her father to sell his oil business—when he refused, the family had to mortgage their home. As such, the birth of U.S. antitrust action captures enduring political-economy dynamics: Standard Oil had enormous political **clout** and averted regulatory action for years. Yet, a groundswell of popular anger was sufficient to align political incentives to apply the law to Standard Oil. It would be a **mistake to see Tarbell’s victory as a case of idiosyncratic history**. On the contrary, the force of public outrage—surprisingly often channeled via the vehicle of literature—plays out again and again in the 20th century. Consider the emergence of the Food and Drug Administration, for example. Upton Sinclair, a contemporary of Tarbell’s, published The Jungle a little after Tarbell’s History. Despite being a work of fiction, The Jungle spawned massive popular backlash against the disgusting conditions in the meat processing plants of Chicago—the reading remains revolting to this day. The public reaction to Sinclair’s story, initially published in 1905, pushed President Roosevelt to sign the Pure **F**ood and **D**rug **A**ct, which passed by an overwhelming bipartisan majority of 63 to 4 in the Senate in 1906 and founded what is now the FDA. There are many other examples of popular resentment driving regulatory action: The financial Panic of 1907 helped create the Federal Reserve; Rachel Carson’s Silent Spring contributed to the swaying of another Republican President, Richard Nixon, to create the **E**nvironmental **P**rotection **A**gency; the Great Financial Crisis of 2008 led to the Consumer Financial Protection Bureau—and so on.

Without outrage, regulators meander While the historical examples above draw straight lines from anger to regulatory shock, it is true that some of the biggest antitrust cases in U.S. regulatory history meandered for decades—antitrust cases against **AT&T,** [**IBM**](https://fortune.com/company/ibm)**, and** later [**Microsoft**](https://fortune.com/company/microsoft) come to mind. Here, too, popular backlash—or the lack of it—played a critical role in shaping their regulatory fates. Yes, AT&T was broken up—in 1982. But its conflict with antitrust regulators had begun all the way back in 1913. Over the years, the company bounced around from being viewed as a good monopoly to being a state-sanctioned monopoly (recall you had to rent your phone from Ma Bell—but couldn’t own it). After a meandering 70-year regulatory pursuit, AT&T lost its case and agreed to break up on Jan. 8, 1982. By contrast, on that same day in 1982, a 30-year–long regulatory pursuit of IBM was dropped. Yet **despite avoiding a breakup**, the cumulative **impact on IBM was** arguably more **significant** than that on AT&T. IBM had been pushed into unbundling hardware and software, which successfully **opened space for new software** behemoths—leaving IBM strategically on the back foot. Popular anger did not underpin the regulatory pursuits of Ma Bell and Big Blue. They did not inspire indignation, perhaps because expensive long-distance calls and clunky computers did not spark emotion—or perhaps because their stories lacked their Tarbell or Sinclair. That did not prevent regulatory action, but that action played out on the battlefield of technocratic concern, which translated into a long-winded **regulatory dance and yielded outcomes** far preferable to Standard Oil’s fate. Microsoft, which moved into the space that IBM’s curtailment had opened, remains an interesting case in the context of outrage and regulation. For there was—some—outrage. It’s easy to forget how loathed in some quarters the firm and Bill Gates were in the late 1990s, just around the time when regulatory scrutiny peaked: the bullying of Netscape, the bundling of software, Gates’ widely panned deposition performance in testimony before Congress, all drove popular dislike if not quite mass resentment. What remains mostly forgotten today is that the judge ruled, in 2000, that Microsoft should break up—delivering a fast judgment aligned with popular sentiment of recent years. Yet the outrage didn’t sustain itself through political transition and appeal. In 2001 the Justice Department said it was no longer seeking a breakup and agreed to a settlement. Is Big Tech more like Standard Oil, or IBM? While history should always be used with care, the correlation between popular backlash (or lack thereof) and sharp regulatory backlash (or lack thereof) remains compelling. In some ways, this is more surprising if we think of antitrust regulation as a field of technocratic economic analysis, and less surprising if we think of it as politicians responding to incentives—such as when the influence of corporate power is outweighed by the electoral threat of outrage.

# 2AC --- Swing 1 R2

## 2AC --- Case

### 2AC --- Realism

#### 2. Research --- A Consensus of research from numerous fields corroborates our theory

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.

#### 2. Means the links are inevitable --- Violence is inevitable and their strategy destroys cooperation

Johnson and Thayer, 16 (Dominic Johnson and Bradley Thayer, Johnson, Ph.D, Department of Politics and International Relations, University of Oxford, Thayer, Ph.D Stjórnmálafræðideild/Department of Political Science, Háskóli Íslands/University of Iceland, Spr 2016, accessed on 12-7-2021, PubMed, "The evolution of offensive realism", <https://pubmed.ncbi.nlm.nih.gov/27378020/)//Babcii>

Criticisms and extensions of an evolutionary approach

Scope conditions: Human behavior is contingent, not fixed

We recognize that a challenge to the theory of offensive realism is the empirical mix of cooperation and conflict in the real world. Offensive realists and other theorists of international relations may see more or less of each. However, an evolutionary perspective is particularly useful here because it predicts that behavior is contingent, not fixed. **Individuals** may **follow** **generalized decision rules**, but these rules give rise to different behaviors in different contexts. Individuals fight when benefits are expected to exceed costs (on average), **and not otherwise**. Chimpanzees, for example, will attack others when they have a numerical advantage, but they will retreat if they are outnumbered.162 This behavior makes perfect sense from an evolutionary perspective, because a decision-making mechanism that takes account of the probability of winning will spread at the expense of a decision-making mechanism that does not. As such, an evolutionary account does not necessarily expect animals, humans, or states to act as offensive realists all the time and in all situations. Offensive realism also does not have such expectations. Rather, as Mearsheimer points out, states do best if they expand only when the opportunity for gains presents itself—they ‘‘try to figure out when to raise and when to fold.’’163 Evolution has been doing this for a long time.

Our point is therefore not that humans are naturally ‘‘good’’ or naturally ‘‘bad’’ at all times and in all circumstances, but rather that people have evolved mechanisms for egoism, dominance, and groupishness that are **activated** and **amplified** in **certain settings**. Under conditions of **anarchy**, when there is the threat of predation and resource competition (as in many eras and locales in history), cognitive and physiological mechanisms of egoism, dominance, and groupishness are triggered. Where these **conditions are tempered**, such as **in the modern peaceful democracies** of Western Europe, these cognitive and physiological mechanisms are likely to be more **subdued**. For example, Western Europeans feel relatively secure (at least while the United States provides for their security). In general, **humans cooperate where we can** (e.g., within groups or within alliances deriving mutual benefit), but the anarchy of international relations is a hostile environment that, like the one in which humans evolved, tends to trigger our egoism, dominance, and group bias. In short, our theory is one of behavioral ecology—human and animal behaviors are not constants, but are contingent strategies that become engaged or elevated in order to best seek payoffs depending on the particular circumstance or environment. This insight has important implications for international politics because it suggests that we can potentially create—at least in principle—environments that take account of our human nature so we can turn them to our advantage, such as designing institutions **that elicit cooperative rather than conflictual tendencies**.164,165

### AT --- Not true

#### Yes true --- Comprehensive studies prove that the drive to power and conflict is fundamental human nature

Johnson and Thayer, 16 (Dominic Johnson and Bradley Thayer, Johnson, Ph.D, Department of Politics and International Relations, University of Oxford, Thayer, Ph.D Stjórnmálafræðideild/Department of Political Science, Háskóli Íslands/University of Iceland, Spr 2016, accessed on 12-7-2021, PubMed, "The evolution of offensive realism", <https://pubmed.ncbi.nlm.nih.gov/27378020/)//Babcii>

Unsurprisingly, direct evidence of human behavior from the Pleistocene era is rare, but in addition to archeological finds, we have evidence from recent and contemporary indigenous societies that **offer a model for the behavior** of our distant ancestors, who lived under similar social and ecological conditions. Napoleon Chagnon’s work among the Yanomamo of the Amazon revealed that indigenous groups had a constant need to find **new territory** as they expanded and split, and they experienced a constant fear of other groups because **violent conflict was a recurring strategy** used to stake out a livelihood.75 The Yanomamo are just one example of a pattern that extends to a wide range of indigenous societies around the world.76,77 **Across such societies**, around 15 percent of male deaths occurred in warfare, which compares to a figure of around 1 percent for the United States and Europe in the so-called bloody 20th century (and in many of those small-scale indigenous societies, the rate of male deaths from warfare is much higher than the average figure of 15 percent).78,79

It has been argued that such high levels of conflict among indigenous societies might have been caused by pressure from more developed societies encroaching on their territories and way of life from the outside. **However, a study by Wrangham** and Glowacki, which explicitly looked at warfare among hunter-gatherers who were surrounded by other hunter-gatherers, found that **warfare was just as common** in this more ‘‘natural’’ setting.80 Evidence from across the **cumulative research** of archeologists and anthropologists **indicates that violence is a widespread feature** of small-scale foraging societies and follows a pattern that is consistent as far back as we can see in the ethnographic and archeological record.81

Wrangham’s and Glowacki’s work has also established empirical support for the evolutionary logic in the patterns of intergroup conflict. Hunter gatherers have recurrent tendencies, including hostility toward members of different societies, and for killing to be carried out in relative safety—that is, only when there is a strong asymmetry in power between subgroups, such as in a raid or ambush (the ‘‘imbalance of power’’ hypothesis). By contrast, as ‘‘rational actor’’ theorists would expect, hunter-gatherers are averse to the risk of fighting symmetric battles with roughly equivalent numbers on each side.82 Importantly, sustained instances of imbalances of power over evolutionary history would have led to the selection of contingent aggression. In other words, since imbalances of power offer systematic opportunities for low-cost aggression over time, we should expect human groups to have developed a disposition to act aggressively against others when the opportunity arises, because opportunistic aggression is a strategy that pays off on the average. Indeed, Wrangham and Glowacki find evidence that after ‘‘warriors killed members of a neighboring society, the killer’s group benefited as a whole via territorial expansion’’83— precisely as has been shown for intergroup killings by chimpanzees.

Chagnon, Wrangham and Glowacki and others have also shown that individuals, as well as the group, may gain significant reputational and reproductive advantages of participation in warfare. Although warfare is a high-stakes collective action problem, warriors are willing to participate because over evolutionary time the dividends have tended to outweigh the costs.84,85

These findings may be surprising for those who hold to the popular notion of a **harmonious** and **peaceful past** in which humans were at one with nature and each other, but the **evidence suggests the opposite. Aggression is not a cultural accident, but an evolutionary adaptation** for acquiring and securing resources—just as it is for other species. We do not, however, need to rely on mere analogies linking animal and human behavior. Looking at the environment in which our own species evolved, we find significant empirical evidence for, and a Darwinian logic favoring, intergroup aggression. Whether or not humans and chimpanzees inherited warlike propensities from a common ancestor, there was nevertheless a strong selection pressure in both species to develop them.

## 2AC --- K

### 2AC --- AT --- Link

#### Absent US pressure, China will export its surveillance state abroad and use debt trap diplomacy---even if they win Heg bad, the world has no alternative.

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Much of Washington has fretted over China’s mercantilist approach to economics in general and views the Belt and Road Initiative largely through this lens. Yet the concerns over Beijing’s current approach should go beyond dollars and yuan. By fueling debt dependency, advancing a “China First” development model, and undermining good governance and human rights, the initiative offers a deeply illiberal approach to regions that contain about 65 percent of the world’s population and one-third of its economic output. The hype surrounding the Belt and Road Initiative — Chinese President Xi Jinping’s signature initiative on the world stage — has recently shifted into overdrive. In China’s domestic politics, support for the project has come to signify loyalty to the country’s president-for-life. At the same time, the Belt and Road serves as an overarching narrative into which Beijing can fit its foreign economic policy in regions as disparate as the Arctic and Latin America. Yet the initiative’s rhetoric and branding should not obscure its core aim: to access markets and project influence and power throughout Eurasia and the Indian Ocean rim. And China has already dedicated significant resources to the effort: Estimates put total Belt and Road-related construction and investment at more than $340 billion from 2014 to 2017. The United States cannot ignore the Belt and Road Initiative. The offer of financing and other assistance addresses a very real need in many countries for roads, ports, railways, telecommunications networks, and other infrastructure. And given that many see no credible alternative on offer, straight-out American opposition is bound to fail. Instead, the Trump administration should try to shape the project, where possible, through a combination of engagement and pressure. At the same time, it is imperative to counter the initiative’s most illiberal elements. This means advancing a free, open, and sustainable model of development, fostering political resiliency in select countries, launching a new digital development fund, and more. Undertaken in concert with U.S. allies and partners, these kinds of moves will not demand massive new resources. But absent steps like them, Belt and Road-fueled illiberalism will spread across the globe unchecked. To understand how the Belt and Road Initiative can threaten human rights and good governance, consider first how its projects are financed. Thus far, China has largely favored loans over grants. It is not a member of the Paris Club of major creditor nations, and it has shown little inclination to adhere to internationally recognized norms of debt sustainability, such as the sovereign lending principles issued by the United Nations Conference on Trade and Development. At the same time, many of the recipient countries participating in the project lack the capability to assess the long-term financial consequences of China’s loans — or they may simply accept them, assuming the bills will come due on a future government’s watch. Ballooning, unsustainable debt is the predictable result. Sri Lanka, where in 2017 some 95 percent of government revenue went to debt repayment, represents the best-known example of Belt and Road’s negative impact on a country’s balance sheet. But Sri Lanka is only the most prominent case; a recent study by the Center for Global Development identified eight countries — Djibouti, the Maldives, Laos, Montenegro, Mongolia, Tajikistan, Kyrgyzstan, and Pakistan — that are at particular risk of debt distress due to future Belt and Road-related financing. Naturally, large government-backed loans to foreign countries come with political strings attached. The potentially destructive international economic consequences of failing to make repayments breeds long-term dependence on China and expands Beijing’s influence. As a result, recipient countries will find their foreign-policy choices constrained — even if future governments seek to exit Beijing’s orbit. Sri Lanka is again a case in point. There, the government of Maithripala Sirisena inherited a mountain of Belt and Road-related debt from its pro-Chinese predecessor and, despite a clear desire to move closer to India and the United States, had no recourse but to engage in a debt-for-equity swap with China. The deal left Beijing with a 99-year lease on the strategically located port at Hambantota. The Belt and Road Initiative provides a vector through which China can exert influence well beyond countries’ foreign-policy choices. The geographic expanse covered by the initiative includes many nations with high levels of corruption, and with domestic institutions that range from fragile democracies to full-blown autocracies. With Chinese companies being generally less transparent than their international peers, and with Beijing’s zeal to curb bribery and corporate malfeasance limited to its domestic economy, a massive influx of Chinese funds into countries with weak governance is likely to exacerbate ongoing corruption problems. And given that some projects are clearly linked to geopolitical objectives — like gaining control over commercial assets with potential military uses — Beijing may well employ graft to ensure that foreign political elites look favorably on its offers. China’s planned development of a “new digital Silk Road” has received comparatively less attention than other elements of the initiative but is equally troubling. China’s digital blueprint seeks to promote information technology connectivity across the Indian Ocean rim and Eurasia through new fiber optic lines, undersea cables, cloud computing capacity, and even artificial intelligence research centers. If realized, this ambitious vision will serve to export elements of Beijing’s surveillance regime. Indeed, Chinese technology companies already have a track record of aiding repressive governments. In Ethiopia, likely prior to the advent of Belt and Road, the Washington Post reports that China’s ZTE Corporation “sold technology and provided training to monitor mobile phones and Internet activity.” Today, Chinese tech giant Huawei is partnering with the government of Kenya to construct “safe cities” that leverage thousands of surveillance cameras feeding data into a public security cloud “to keep an eye on what is going on generally” according to the company’s promotional materials. Not all elements of China’s domestic surveillance regime are exportable, but as the “New Digital Silk Road” takes shape, the public and online spaces of countries along it will become less free. Beyond fueling corruption and enhancing surveillance, the initiative will stifle free speech, at a minimum by strengthening Beijing’s ability to silence criticism. States financially beholden to China will become less willing to call out Beijing’s domestic human rights abuses, for instance, and less eager to object to its foreign-policy practices. This dynamic is already playing out within the European Union. In mid-2017, for the first time, the EU failed to issue a joint condemnation of China at the U.N. Human Rights Council. Greece, which had recently received a massive influx of Chinese investment into its Port of Piraeus, scuttled the EU statement. Other cash-strapped democratic governments, when confronting the choice between Belt and Road’s immediate – even if one-sided – economic benefits and the need to defend human rights globally, may well follow Greece’s example. Similarly, companies dependent on the Chinese market are already acquiescing to Beijing’s demands – such as by firing an American employee who “liked” a pro-Tibetan independence tweet – and by self-censoring, as in the efforts by some Hollywood producers to ensure that films contain no lines (supportive of Tibet, say, or critical of Xi Jinping) that might arouse anger within the Chinese Communist Party. As the initiative extends its reach, it is easy to imagine government officials feeling similarly compelled. China’s Belt and Road-related activism leaves the United States in a bind. Lacking additional billions of dollars in government-directed funds, a raft of state-owned enterprises, or well-capitalized banks linked to the government, Washington cannot simply outbid Beijing. Nor should it try to do so. Virtually no country would sign on to an “us or them” approach to the Belt and Road Initiative even if the United States were to offer such a stark alternative, and inducing infrastructure-strapped countries to “just say no” to Chinese funds is a tough sell. The best course for Washington is to offer a positive vision of physical and digital connectivity while taking concrete steps to limit the initiative’s most illiberal effects. The Trump administration is off to a rhetorical start with its invocation of a “free and open Indo-Pacific,” to which it should couple a “free, open, and sustainable” model of development in that region and beyond. Drawing an implicit distinction with Belt and Road’s debt-fueled focus on hard infrastructure generally constructed with Chinese workers, the United States, together with other democracies such as Japan, European nations, and India, should advance an alternative approach. It should emphasize local capacity-building, the transfer of skills, responsible financing, quality, and innovation. These elements should become the watchword of the free, open, and sustainable model. Although some governments willingly take on unsustainable debt to finance Belt and Road projects and channel contracts to Chinese companies behind closed doors, others simply lack the technical capacity to assess debt repayment and the long-term costs associated with specific infrastructure projects. The United States, working with its allies and partners, can play a critical role in helping to develop the human capital necessary to adequately determine whether a country should take on a Belt and Road project. This would include such mundane but important efforts as building technical financial assessment capacity, training procurement officials, and enhancing the project management skills of government officials. The United States should also double down on its international support for democracy, civil society, and rule of law. Transparency, domestic checks and balances, and a free press can function as powerful impediments to the sort of corrupt backroom deals that leave China with enduring financial leverage and receiving governments with a long-term debt hangover. Even modest efforts in nondemocratic countries — to train investigative journalists, for example, or to strengthen the capacity of civil society organizations — may constrain China from pursuing the most one-sided Belt and Road deals. Information technology connectivity is the one area in which the United States should most actively compete with China. Working with Europe and Japan, Washington could establish a dedicated development fund under the umbrella of the Organization for Economic Cooperation and Development that would finance digital development projects. Such a fund should only support companies that are committed to globally recognized rights of freedom of expression and privacy and that agree to an independent third-party audit of its software and hardware exports. In March 2000, then-U.S. President Bill Clinton channeled the prevailing wisdom about China in pressing for approval of permanent normal trade relations with Beijing and its admission to the World Trade Organization. “Bringing China into the WTO,” Clinton said, “doesn’t guarantee that it will choose political reform.” Nevertheless, Clinton argued, “the process of economic change will force China to confront that choice sooner, and it will make the imperative for the right choice stronger.” The notion that borders open to trade and investment were bound to allow in liberal ideas struck many policymakers as entirely logical. But that was an illusion. A richer and more globally connected China has not become a more democratic one — instead, Beijing’s economic strength now allows it to spread its own illiberal values to other countries. Nearly two decades after China’s entrance into the world economy, it is up to U.S. President Donald Trump to ensure that the illiberal values China is exporting under the guise of the Belt and Road Initiative do not take root across the globe.

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

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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.

#### 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.

### 2AC --- Cap

#### Growth is sustainable AND solves existential risks

hÉigeartaigh 17 – Professor @ Cambridge, PhD in Genomics from Trinity College Dublin (Sean, “Technological Wild Cards: Existential Risk and a Changing Humanity”, <https://www.bbvaopenmind.com/en/articles/technological-wild-cards-existential-risk-and-a-changing-humanity/>, Accessed 3-7-2019)

Technological progress now offers us a vision of a remarkable future. The advances that have brought us onto an unsustainable pathway have also raised the quality of life dramatically for many, and have unlocked scientific directions that can lead us to a safer, cleaner, more sustainable world. With the right developments and applications of technology, in concert with advances in social, democratic, and distributional processes globally, progress can be made on all of the challenges discussed here. Advances in renewable energy and related technologies, and more efficient energy use—advances that are likely to be accelerated by progress in technologies such as artificial intelligence—can bring us to a point of zero-carbon emissions. New manufacturing capabilities provided by synthetic biology may provide cleaner ways of producing products and degrading waste. A greater scientific understanding of our natural world and the ecosystem services on which we rely will aid us in plotting a trajectory whereby critical environmental systems are maintained while allowing human flourishing. Even advances in education and women’s rights globally, which will play a role in achieving a stable global population, can be aided specifically by the information, coordination, and education tools that technology provides, and more generally by growing prosperity in the relevant parts of the world. There are catastrophic and existential risks that we will simply not be able to overcome without advances in science and technology. These include possible pandemic outbreaks, whether natural or engineered. The early identification of incoming asteroids, and approaches to shift their path, is a topic of active research at NASA and elsewhere. While currently there are no known techniques to prevent or mitigate a supervolcanic eruption, this may not be the case with the tools at our disposal a century from now. And in the longer run, a civilization that has spread permanently beyond the earth, enabled by advances in spaceflight, manufacturing, robotics, and terraforming, is one that is much more likely to endure. However, the breathtaking power of the tools we are developing is not to be taken lightly. We have been very lucky to muddle through the advent of nuclear weapons without a global catastrophe. And within this century, it is realistic to expect that we will be able to rewrite much of biology to our purposes, intervene deliberately and in a large-scale way in the workings of our global climate, and even develop agents with intelligence that is fundamentally alien to ours, and may vastly surpass our own in some or even most domains—a development that would have uniquely unpredictable consequences.

#### 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.

### 2AC --- Alt (Epist)

#### Alt fails ---

#### 1. Epistemology is secondary to the plan’s harm reduction -- the alt causes endless debates at the cost of material improvements in the day to day.

**Jarvis ’0** [Darryl; 2000; Former Senior Lecturer in International Relations at the University of Sydney; *International Relations and the Challenge of Postmodernism*, *University of South Carolina Press*, “Continental Drift,” p. 128-129; GR]

More is the pity that such irrational and obviously abstruse debate should so occupy us at a time of great global turmoil. That it does and continues to do so reflect our lack of judicious criteria for evaluating theory and, more importantly, the lack of attachment theorists have to the real world. Certainly, it is right and proper that we ponder the depths of our theoretical imaginations, engage in epistemological and ontological debate, and analyze the sociology of our knowledge. But to support that this is the only task of international theory, let alone the most important one, smacks of intellectual elitism and displays a certain contempt for those who search for guidance in their daily struggle as actors in international politics. What does Ashley’s project, his deconstructive efforts, or valiant fight against positivism say to the truly marginalized, oppressed, and destitute? How does it help solve the plight of the poor, the displaced refugees, the casualties of war, or the émigrés of death squads? Does it in any way speak to those whose actions and thoughts comprise the policy and practice of international relations?

On all these questions one must answer no. This is not to say, of course, that all theory should be judged by its technical rationality and problem-solving capacity as Ashley forcefully argues. But to support that problem-solving technical theory is not necessary—or in some way bad—is a contemptuous position that abrogates any hope of solving some of the nightmarish realities that millions confront daily. As Holsti argues, we need ask of these theorists and their theories the ultimate question, “So what?” To what purpose do they deconstruct, problematize, destabilize, undermine, ridicule, and belittle modernist and rationalist approaches? Does this get us any further, make the world any better, or enhance the human condition? In what sense can this “debate toward [a] bottomless pit of epistemology and metaphysics” be judged pertinent, relevant, helpful, or cogent to anyone other than those foolish enough to be scholastically excited by abstract and recondite debate.

#### 2. Changing epistemology is impossible --- Offensive realism is fixed human nature, because it is the result of evolved natural reactions --- That’s Johnson and Thayer

#### 3. Aff is a DA --- Changing research strategies rejects the 1AC’s use of legalistic research as a resistance to big tech and causes a nuclear transition war

#### Elites nuke the alt

Jensen 6 (Derrick Jensen 6, Eastern Washington University, Endgame: Resistance, p. 873)

Maybe nukes; I have absolutely no doubt that when those who run the United States feel their power slipping, whether through oil shortages, external invasion, internal revolt, or ecological collapse, they will have no moral qualms about nuking anywhere they feel necessary, including places in the United States (hell, they’ve bombed Nevada for decades now). Indeed, I have great fears that when they feel their power slipping- and slip it will no matter what anyone does- they may blow up the entire planet before they give up their losing game.

#### No mindset shift

Matthew Lockwood 11, previously Associate Director for Climate, Transport and Energy at the Institute for Public Policy Research, “The Limits to Environmentalism”, March 25, <http://politicalclimate.net/2011/03/25/the-limits-to-environmentalism-4/>

This brings us neatly finally to the third problem with PWG: politics. Jackson does have some discussion of the need for our old favourite “political will” towards the end of the book, and there are some examples of concrete ideas (e.g. shorter working week, ban advertising aimed at children), but there is basically no political strategy. Indeed, the argument is framed in terms of the need for “social and economic change” and “governance”, but not politics at all. The key question is how we are supposed to get from where we are to where he wants us to be. Jackson acknowledges that **at the moment, many people want growth (or more precisely, economic stability) and so demand it of politicians, who then have a political incentive to deliver it**. The quandary (not really acknowledged) is which strategy to adopt in this situation. Do you first reshape the economy to deliver economic stability without growth (e.g. by a shorter working week), which then demonstrates to people socially and politically that growth isn’t necessary for a good life, or do you first have to bring about major social change, moving people away from consumerism, as a precondition for transforming the economy and making the end of growth politically feasible? The discussion in chapter 11 of the book sort of implies that Jackson is thinking in terms of the latter route, but it actually has no strategy. He lays out (some quite conventional, even dare I say it, already proposed by economists) policies like carbon taxation and the aforementioned shorter working week but there is nothing on political narrative. The closest we get to a strategy for social transformation is banning advertising aimed at children (also a theme of Tom Crompton’s) and policies to drive greater durability of products. A counterview might be that all these changes are needed, and it doesn’t matter so much what happens first, that they all reinforce each other etc etc. But I don’t think that’s enough. The political party in the UK that comes closest to offering the Jackson vision is the Green Party. They got 1% of the popular vote in the 2010 general election, and one MP. **What stronger evidence can there be that the vision on its own is not enough?** A final point takes us back to equity (see previous post), but this time within rich countries. Certainly within the US and the UK, a large group of people in the low-to-middle part of the income distribution have seen their real incomes stagnate or fall over the last decade, as the rich have got richer. Telling this “squeezed middle” that economic growth is to end is not going to go down well unless there is a credible strategy for redistribution. That’s why a good initial step for a more sustainable economy might be a set of good old-fashioned social democratic policies on tax and spend. Prosperity without Growth raises some very important questions, and Tim Jackson shows how tight a squeeze we are in. But the book leaves some even more crucial questions hanging. Of course ending economic growth in rich countries would make a solution to ecological limits a bit easier, but **this would play only a small role**. In the absence of radical technological change, only serious “de-growth”, what Kevin Anderson and Alice Bows call “planned economic recession” would be sufficient to bring about the cut in emissions needed. With rapid growth in poor countries this conclusion is even stronger. So what we should be focusing on is achieving that technological change. Yes, it hasn’t materialised so far, but nor have the policies for low carbon innovation we need to produce it – like Gandhi’s Western civilisation, the low carbon revolution would be a good idea. And yes, getting those policies in place will require political effort. **But that effort will be as nothing compared with the political challenge of replacing capitalism with a new steady state system** either lacking innovation or with a disappearing working week. Perhaps the most fundamental, indeed philosophical issue here is that, despite the fact that Jackson has made a good effort to make an argument about limits into an argument about quality of life, his underlying message is (pace Obama): “No, we can’t”. But beyond the environmentalist camp, **this message will not work**. In the face of the biggest collective challenge that humanity has faced, we need a narrative that has the human potential to solve problems, and overcome apparently unbeatable odds, at its heart.