## 1AC Kentucky

### 1AC---Platforms

Advantage 1 is platforms---

#### Platform companies facilitate transactions between two sets of users—think Amazon—the *Amex* decision made it extremely difficult to challenge anticompetitive conduct in platform markets

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

A. Against Platform Exceptionalism

In *Amex*, the Supreme Court disregarded a basic principle about markets, which is that they consist of close substitutes.212 Instead, it lumped production complements into the same market, and in the process, it stymied coherent economic analysis of the problem. To be sure, power in one side of a two-sided market cannot be assessed without determining what is occurring on the other side. But one does not need to group the two sides into the same “market.” Rather, a relevant market should be determined by reference to the side where anticompetitive effects are feared. Then, assessing power requires the fact finder to consider offsetting effects, some of which may occur on the other side.213

Second, the Court ignored an important distinction between fact and law. Disputes about market boundaries involve questions of fact. Nevertheless, the majority wrote—as a matter of law—that two-sided platforms compete exclusively with other two-sided platforms. These dicta have already produced mischief in lower-court decisions. For example, it led one court to conclude that a merger between a two-sided online flight-reservation system and a more traditional system could not be a merger of competitors.214

Third, without argument or evidence, the Court required litigants to show market power indirectly in vertical restraints cases by reference to a relevant market, even though superior techniques are available. Direct measures are particularly useful in digital markets, where the necessary data are easy to obtain and product differentiation makes traditional market definition unreliable.215 This was another breach of the boundary between fact and law.

Fourth, the Court misunderstood the economics of free riding, ignoring the fact that when a firm is able to recover the value of its investments through its own transactions, free riding is not a problem.

Fifth, the Court failed to perform the kind of transaction-specific factual analysis that has become critical to economically responsible antitrust law. Rather, it simply assumed, without examining the actual transactions before it, that losses on one side of a two-sided market are inherently offset by gains on the other side.216 Amex’s antisteering rule produced immediate losses for both the affected cardholder and the affected merchant. The only beneficiary was Amex, the operator of a platform able to shelter itself from competition. That competition, in turn, would have benefitted both cardholders and merchants.

Markets differ from one another.217 This is why we apply mainly antitrust law to some markets, regulation to others, and some mixture of the two to yet others. It is also why antitrust is so fact intensive, particularly on issues pertaining to market power or competitive effects. Indeed, the biggest advantage that antitrust has over legislative regulation is its fact-driven methodology. Antitrust courts do and should avoid speaking categorically about market situations that are not immediately before them and avoid making cursory conclusions based on inadequate facts. Within the antitrust framework, there is no reason to think that digital platforms are unicorns whose rules as a class differ from those governing other firms. Every market has its distinct features, but the ordinary rules of antitrust analysis are adequate to consider them. The *Amex* decision is a cautionary tale about what can happen when a court is so overwhelmed by a market’s idiosyncrasies that it makes grand pronouncements, abandoning well-established rules for analyzing markets in the process.

#### Fintech’s disruptive startups have been squashed by large financial institutions

Loo ’18 – Associate Professor at BU Law [Rory Van; Associate Professor, Boston University School of Law and Affiliated Fellow, Yale Law School Information Society Project; 2018; "Making Innovation More Competitive: The Case of Fintech"; UCLA Law Review; https://heinonline.org/HOL/Page?handle=hein.journals/uclalr65&div=7&g\_sent=1&casa\_token=&collection=journals; accessed 8-18-2021]

Fintechs can be of any size. Four of the ten largest U.S. companies, Google, Apple, Amazon, and Facebook, all have built payment systems and made other inroads into finance.36 Despite the participation of large technology companies, the main drivers of fintech innovation have been the thousands of startups attracting billions of dollars in investment each year. Startup business models are novel, diverse, and shifting. One of the earliest fintech areas was peer-topeer lending, in which companies link individuals who have money to those who want it.37 Most of the original peer-to-peer companies have already grown beyond their origins and now engage in more familiar "marketplace lending."38 They receive money from banks to lend to individuals, and their innovations have spread to other areas, such as sophisticated analytic tools for estimating borrowers' creditworthiness.39

Unlike the other categories of consumer fintechs, advisory fintechs do not need to directly receive any money from consumers to offer their basic product. The goal of Credit Karma, NerdWallet, Mint, and other advisory fintechs is to help people make all of their financial decisions through a single app.4" These companies learn about users-with permission-by accessing personal bank accounts, credit scores, credit card records, tax returns, and other similar sources of financial information. Users then receive recommendations about credit cards or mortgages with lower fees, savings accounts that pay higher rates, and other products that better meet their needs.41

While the term "fintech" is used here to exclude traditional banks, all major financial institutions have become highly technological. The leading banks are each purchasing fintech startups, forming strategic partnerships, or internally building whiz teams to design new products.42 JP Morgan Chase's Intelligent Solutions Group has over 200 analysts and data scientists and produced about fifty technologies in 2015 alone.43 Goldman Sachs, which has more engineers than Facebook or Twitter, is launching an online lender.44 In light of Wall Street's increasing launch of digital products and adoption of artificial intelligence,45 regulating fintech amounts to regulating the future of finance.

B. Private Sector Institutional Dynamics

Fintechs could in theory pose a threat to traditional banks. Almost threequarters of millennials say they would prefer to receive their financial services from technology companies such as Google and Amazon, rather than big banks.46 Convenience, trust, and price all could play important roles in driving customer switching. Individual users, including small businesses, increasingly find dealing with big banks to be time-consuming and frustrating compared to the ease of tailored startup apps.47 In recent years, consumers have grown distrustful of large financial institutions, whose reputations have been battered by subprime mortgage lending, the financial crisis, the LIBOR scandal, and Wells Fargo opening millions of fake accounts in customers' names. 48

Innovation helps explain why publicly traded companies are disappearing at a faster rate today than ever before-six times as fast as forty years ago.49 Online startups have even thrived in other heavily regulated industries, such as transportation and gambling." Convenience and lower costs have driven some of this success, and many fintechs offer similar advantages.51 Furthermore, unlike some industries that Silicon Valley has invaded, finance lacks a meaningful physical component. This makes the base products inherently vulnerable to digital competition. Traditional banks' infrastructures-including their legacy information systems and physical branches-inhibit their ability to rapidly respond to disruption.

Since Dimon's 2015 warning, however, the dynamics between fintech and traditional firms appear to have shifted. Entrepreneurs who started out wanting to do to banks what Amazon did to retail have wound up licensing their technology to banks.52 As one industry observer puts it: "What was once perhaps an adversarial relationship has warmed .... Many no longer see an existential threat in fintech. Instead, they believe that "[i]t is most likely that the small fintech companies will be subsumed" by large financial institutions. 4

Ii. The Competition Shortcomings

A given fintech's decision of whether to challenge or join banks will depend in part on whether regulations and market dynamics give it a real chance to compete. Competition is extremely difficult to measure, and economic models inadequately consider important factors, such as innovation.5 To assess the hypothesis that a lack of competition inhibits fintech, this Part surveys the evidence related to entry barriers, customer switching, anticompetitive prices, and the relative pace of U.S. innovation.

A. Entry Barriers

When firms face excessive barriers to entering a market, competition can stagnate, raising prices and lowering innovation. 6 Although part of the problem is simply the large amount of regulation, 7 fintech has faced two further entry barriers: traditional firms' ability to block market access and the difficulty in obtaining a federal bank license.

Legacy financial institutions can limit some fintechs' operations through control of data. Most notably, advisory fintechs rely on access to both personal and general product data. 8 Some banks' response has been to block or limit fintechs' access to customer accounts, thereby making it harder for fintechs to provide tailored advice. 9 Legacy institutions can also block fintechs from collecting online product information by using laws never intended for such a purpose, including trespass to chattel, the Digital Millennium Copyright Act,6 " and the Computer Fraud and Abuse Act.61 As a result, advisory fintechs cannot on their own provide comprehensive financial advice to their users. In order to access crucial data, fintechs may need to prioritize big banks' interests over helping consumers switch.

Some legacy firms can also limit market access through their dominant market positions. Over 99 percent of all credit card transactions run through the Visa, American Express, Mastercard, and Discover networks.62 Many commentators have documented credit card companies' ability to engage in exclusionary conduct, such as vertical restraint clauses that prevent merchants from using other payment methods.63 Although credit card companies may not be able to use those same tactics against payment fintechs, their strong market positions could enable them to deploy other tactics. They have, for instance, instituted "Honor All Cards" rules requiring merchants to accept their contactless payments as a condition of accepting plastic cards. These rules arguably "foreclose entry to those digital wallets that.., do not use the credit card networks for payments. 64

#### That means US fintech will lose to international competitors.

Loo ’18 – Associate Professor at BU Law [Rory Van; Associate Professor, Boston University School of Law and Affiliated Fellow, Yale Law School Information Society Project; 2018; "Making Innovation More Competitive: The Case of Fintech"; UCLA Law Review; https://heinonline.org/HOL/Page?handle=hein.journals/uclalr65&div=7&g\_sent=1&casa\_token=&collection=journals; accessed 8-18-2021]

C. International Competitiveness

Less efficient and innovative U.S. financial services are problematic not only in isolation, but also from an international perspective. Scholars and regulators have inconclusively debated whether banks need to be big to maintain their international competitiveness. 12' Less well-recognized is how a lack of domestic competition may undermine U.S. financial firms' global competitiveness. Foreign financial firms may gain an edge by being subject to greater competition in their home markets, thereby being forced to innovate more and operate leanly. This creates two potential problems. First, reduced domestic competitiveness may make the United States less able to enter foreign markets. The U.S. economy has benefited in recent years from billions of dollars in revenues earned abroad by Google and other leading digital companies. 126 Given the growing portion of the global economy taken up by finance, the fintech lag could constitute a large-scale missed opportunity for U.S. firms to strengthen the economy by bringing in revenues earned abroad.

Second, in the long term, American financial firms may become more vulnerable to international competition even in domestic markets. Although U.S. licenses can shield banks from foreign fintech challengers today, distributed ledger technologies may change this. Americans are already increasingly using Bitcoin, Ethereum, and other unregulated virtual currencies based on blockchain technology.127 Much is unknown about how such technologies will develop, and the trust offered by a governmentally overseen financial system may prove difficult to replicate. 128 If, however, an era of wide-open global finance arrives, U.S. financial institutions could find themselves suddenly exposed to international competition as never before. Without U.S. regulators to insulate them, U.S. financial institutions made soft by lesser competition would be more prone to lose significant market share to foreign financial institutions than they would be if domestic markets were more competitive.

#### Fintech innovation is key to the effectiveness of U.S. economic sanctions

Harrell and Rosenberg 19 – Peter E. Harrell is an adjunct senior fellow at the Center for a New American Security; former Deputy Assistant Secretary for Counter Threat Finance and Sanctions at the U.S. State Department. Elizabeth Rosenberg is a senior fellow and director and director of the Energy, Economics, and Security Program at the Center for a New American Security.

Peter E. Harrell and Elizabeth Rosenberg, “Economic Dominance, Financial Technology, and the Future of U.S. Economic Coercion,” *Center for a New American Security*, 2019, pp. 25-26, http://files.cnas.org.s3.amazonaws.com/documents/CNAS-Report-Economic\_Dominance-final.pdf.

Developments in financial technology also have the potential to affect the availability and strength of coercive economic measures over the longer term. The movement to develop blockchain-based, decentralized payments platforms and new digital currencies or tokenized assets that feature anonymity can undermine the strength of coercive economic measures. However, financial technology developments, such as the development of artificial intelligence/machine learning (AI/ML) compliance technologies, also present potential means to better detect and stop evaders and avoiders of U.S. economic coercion throughout global chains of financial interconnectivity.

Financial technologies are not themselves the drivers of potential future changes to the sources of coercive economic leverage. However, they may enable foreign governments to develop better tools to insulate transactions from U.S. jurisdiction. And, regardless of the actions of foreign governments as they spread commercially, they may help evaders duck U.S. coercive economic power in limited but meaningful ways. Conversely, new AI/ML or other technologies may help U.S. policymakers implementing economic coercion to better do their job.

Financial technology can be a facilitator of rapid transformation in the financial services sector. Importantly, financial technology developments will not happen just in the United States; a number of other countries, from China to Singapore to Switzerland, are promoting themselves as financial technology leaders. There is no guarantee that financial technology innovators and investors will be centered in the United States in the future—which represents a vulnerability to U.S. economic prominence.

Maintaining U.S. Leverage

The extent to which the United States will maintain coercive economic leverage in a world where financial technology disrupts aspects of the traditional financial architecture will depend to a significant degree on the extent to which U.S. firms, and large global firms, continue to play a dominant role in the development of the technology. To put it bluntly, a blockchain-based clearing mechanism that enables trade between foreign countries without financial transactions touching the dollar would likely undermine U.S. leverage if the technology were developed and operated by a foreign company that had no need to adhere to U.S. law. The United States would maintain at least some leverage if the technology were developed or operated by a U.S. company obliged to adhere to U.S. sanctions, technology-export restrictions, and other relevant laws, or a foreign company with significant U.S. exposure.

#### Iran’s an emerging global hub for Bitcoin mining. Absent our internal link, they’ll obviate the role of financial institutions and effectiveness of sanctions.

**Erdbrink 19** --- Dutch journalist who is the Northern Europe bureau chief for The New York Times

Thomas, 1-29-2019, "How Bitcoin Could Help Iran Undermine U.S. Sanctions,” New York Times, https://www.nytimes.com/2019/01/29/world/middleeast/bitcoin-iran-sanctions.html

Iran’s economy has been hobbled by banking sanctions that effectively stop foreign companies from doing business in the country. But transactions in Bitcoin, difficult to trace, could allow Iranians to make international payments while bypassing the American restrictions on banks.

In the past, the threat of United States sanctions has been enough to squelch most business with Iran, but the anonymous payments made in Bitcoin could change that. While Washington could still monitor and intimidate major companies, countless small and midsize companies could exploit Bitcoin and other cryptocurrencies to conduct business under American radar.

The United States Treasury, well aware of the threat, is attempting to bring Bitcoin and the others into line. In recent weeks, in response to an internet fraud case originating from Iran, the Treasury imposed sanctions on two Iranians and the Bitcoin addresses, or ‘‘wallets,’’ they had used for trading in the currency.

The Treasury also has warned digital marketplaces that buy and sell Bitcoin and companies that sell computers used to process Bitcoin transactions that they should not provide services to Iranians. Several well-known trading sites are now blocking buyers and sellers from Iran. Some have confiscated money belonging to clients based in Iran.

“Treasury will aggressively pursue Iran and other rogue regimes attempting to exploit digital currencies,” the department said in a statement.

But by their nature, cryptocurrencies are uncontrolled by any person or entity. At best, efforts to regulate or monitor trade in them are episodic, whack-a-mole affairs. With Bitcoin and other cryptocurrencies, there is simply no way to duplicate the banking sanctions that have proved so damaging to the Iranian economy.

Bitcoin transactions are recorded on a digital ledger or database known as the blockchain, maintained communally by many independent computers. The system is designed explicitly to avoid central banks and large financial institutions. Like emails delivered without going through a central postal service, the computer network maintaining Bitcoin records enables the movement of money without going through any central authority.

The Iranian government has been slow to recognize the potential sanctions-evading possibilities of Bitcoin. But it is now considering the establishment of exchanges to facilitate trading, one official, Abdolhassan Firouzabadi, said recently. Despite the failure of Venezuela’s state-backed cryptocurrency, the Petro, Iran’s central bank said recently that it was seriously considering creation of something similar, possibly called the Crypto-Rial, named after the national currency, the rial.

Still, Iran’s venture into Bitcoin pales in comparison to what has been happening the former Soviet republic of Georgia, where thousands of people have jumped into the cryptocurrency business.

At the computerized processing operation in the Iranian desert, no one seemed particularly concerned with the geopolitical implications of Bitcoin.

The operation consisted of 2,800 computers from China, fitted into eight containers, which when linked are called a farm. It makes intense mathematical calculations, known as mining, needed to confirm Bitcoin transactions. Miners collect fees in Bitcoin for their services.

Ignoring the rain, the European visitor used the calculator on his mobile phone to determine how much money could be made from this particular farm, multiplying computer power and deducting electricity and operational costs.

He estimated about five Bitcoins a month, which at roughly $4,000 per Bitcoin at current price levels, would be about $20,000.

“Not too bad,” he said.

The currency fluctuates like any other, though it has proved particularly volatile, sinking to slightly less than $4,000 a unit from nearly $20,000 about a year ago.

“We’ll have two engineers on site to keep everything running, that’s it,” said Behzad, the chief executive of IranAsic, the company running the site. He, like the European investor, did not want to provide his family name, out of fear of penalties from the United States.

The Chinese computers, called Antminer V9s, were regarded as outdated by the European visitor. Still, he said, “I guess this is the last place on earth where they are still profitable.”

That helps explain why Iran seems to be taking its first baby steps toward becoming a global center for mining Bitcoins. Because of generous government subsidies, electricity — the energy for the computers needed to process cryptocurrency transactions — costs little in Iran. It goes for about six-tenths of a cent per kilowatt-hour, compared with an average of 12 cents in the United States and 35 cents in Germany.

In recent months, dozens of foreign investors from Europe, Russia and Asia have considered moving their mining operations to Iran and other low-cost countries like Georgia. “We have to be flexible in this industry and go where prices are the lowest in order to survive,” said the European investor.

#### Tracking solves Iranian evasion – US lead key.

**Robinson 21** --- Ph.D., Co-founder and Chief Scientist discusses cryptocurrency forensics, investigations, compliance, and sanctions.

Tom, "How Iran Uses Bitcoin Mining to Evade Sanctions and “Export” Millions of Barrels of Oil," Elliptic, <https://www.elliptic.co/blog/how-iran-uses-bitcoin-mining-to-evade-sanctions>

The Iranian state is therefore effectively selling its energy reserves on the global markets, using the Bitcoin mining process to bypass trade embargoes. Iran-based miners are paid directly in Bitcoin, which can then be used to pay for imports - allowing sanctions on payments through Iranian financial institutions to be circumvented.

This has become all but an official policy, with a think tank attached to the Iranian president’s office recently publishing a report highlighting the use of cryptoassets to avoid sanctions.

Many of those making the Bitcoin transactions and paying the fees to Iran-based miners will be located in the United States - the very country spearheading the sanctions. As the US government considers whether to lift some sanctions on Iran in exchange for a return to a nuclear deal, it will need to consider the role that Bitcoin mining plays in enabling Iran to monetise its natural resources and access financial services such as payments.

In the meantime, financial institutions should consider the sanctions risk they are exposed to due to Iranian Bitcoin mining - particularly those that are beginning to offer cryptoasset services. If 4.5% of Bitcoin mining is based in Iran, then there is a 4.5% chance that any Bitcoin transaction will involve the sender paying a transaction fee to a Bitcoin miner in Iran. Financial institutions should also be on the lookout for crypto deposits originating from Iranian miners that are seeking to cash-out their earnings.

Solutions for Sanctions Risks

However as we discuss in more detail our new sanctions guide, solutions to these challenges exist and are already used by financial institutions engaging in cryptoasset activity.

For example, blockchain analytics solutions such as those provided by Elliptic can be used by regulated financial institutions to detect and block cryptoasset deposits from Iran-based entities including miners. Techniques can also be employed to ensure that transaction fees are not paid to miners in high risk jurisdictions.

#### Strong sanctions prevent Iranian nuclear acquisition---military threats alone are not sufficient.

**Morrison 21** --- Master of Arts of Political Science, University of Waterloo.

Kallen, 2021, “Economic Sanctions and Nuclear Non-proliferation: A Comparative Study of North Korea and Iran, “University of Waterloo, Fulfilment of the thesis requirement for the degree of Master of Arts, https://uwspace.uwaterloo.ca/bitstream/handle/10012/16666/Morrison\_Kallen%20.pdf?sequence=3

Economic sanctions have been successful in stopping Iran from pursuing their nuclear program thus far. Iran has conceded multiple times to the United States and the international community to halt the enrichment of uranium and the advancement of their nuclear program. The most notable example of Iran’s concessions has been the signing of the Joint Comprehensive Plan of Action in which Iran agreed to halt and greatly reduce their nuclear program in return for substantial easing of economic sanctions. The second criteria has been met as Iran’s economy has significantly worsened due to continued economic pressure from the United States and the international community. Iran’s economy has significantly worsened due to continued economic pressure from the United States and the international community. Continued economic pressure has been paramount to bringing Iran to the negotiating table. While the United States and its regional allies do pose a military threat to Iran, that is unlikely a sufficient factor in dissuading Iran.

We have established that the level of political contestation in the targeted countries, their economic and security vulnerabilities, and the degree of international cooperation are important factors in determining if economic sanctions are effective at limiting nuclear proliferation. In Iran’s case the regime, while authoritarian, allows for limited political contestation. The general public gets to elect the president (even if candidates are handpicked by the supreme leader). Iranians have been able to protest against the government. One goal of economic sanctions is to galvanize the general public against the government and their policy decisions. Iranians have indeed been frustrated by the sanctions and voiced their discontent with the government policies targeted by the sanctions.

Iran’s international environment is also conductive for economic sanctions to be effective. Iran is a regional power with an impressive arsenal of missiles and extensive network of proxy forces. Therefore, nuclear weapons are not imperative for Iran’s defence. On the other end, Iran’s economy is largely based on oil and gas exports. Integration into the global market is very important for Iranians and a vital source of revenue for the government. Economic sanctions have hurt the Iranian economy and therefore have hurt Iranians. The economic squeeze has brought Iran to the negotiating table in the past and will likely do so in the future. The international approach to Iran has been encompassing with the European Union and the United Kingdom taking a common stand with the United States in preventing Iran from acquiring nuclear weapons. Even after the United States left the JCPOA the EU and UK have attempted to develop mechanisms to provide Iran with economic incentives to keep Iran abiding to the JCPOA. Even though China has given Iran an economic lifeline there is tension within Iran over concerns of becoming too economically dependent on China.

#### Israel would preempt before the nukes come online. Sparks a wider regional conflict that draws in all the major powers.

Scheinman 18 – Security Studies Chair, Nat’l War College; Nuclear Nonprolif Rep. for Obama

Adam M. Scheinman, What if Iran leaves the NPT?, 8 June 2018, <https://thebulletin.org/2018/06/what-if-iran-leaves-the-npt/>

Not to diminish the immensity of North Korea’s nuclear challenge, but Iran’s withdrawal from the NPT carries weightier risks. It would likely mean that Iran’s Supreme Leader had given the green light to an Iranian nuclear weapon, opening the floodgates to NPT withdrawals by other Arab states—Saudi Arabia, the UAE, and Egypt head that list. These and possibly other Sunni governments, none of whom can rely on a major power for defense, may conclude that they require their own nuclear weapon to check Iran’s rise. The Saudis are very clear and public on this point.

More immediately, Israel may feel compelled to strike Iranian nuclear facilities before they become fully operational. This raises the specter of a regional war that may draw in several of the nuclear weapon states—the United States, the UK, France, and Russia—and reshape the Middle East in ways we cannot predict. Whether the NPT could survive such a shock is another unknown.

#### Loss of economic leverage alone is sufficient to trigger the impact.

**Zilber 21** --- Journalist covering Middle East politics and an adjunct fellow at the Washington Institute for Near East Policy.

Neri, 9-14-2021, "Israel Can Live With a New Iran Nuclear Deal, Defense Minister Says," Foreign Policy, https://foreignpolicy.com/2021/09/14/israel-iran-nuclear-deal-defense-minister-gantz/

TEL AVIV, Israel—Israel would be willing to accept a return to a U.S.-negotiated nuclear deal with Iran, Defense Minister Benny Gantz told Foreign Policy—but Israeli officials are also pressing Washington to prepare a serious “demonstration of power” in case negotiations with Tehran fail.

The remarks, made during an exclusive interview last week, appear to reflect a shift in policy for Israel, which under the leadership of former Prime Minister Benjamin Netanyahu loudly opposed the 2015 nuclear agreement and worked to undermine it.

Former U.S. President Donald Trump pulled the United States out of the agreement in 2018, but the Biden administration has renewed the diplomacy—even as Iran moves closer to enriching enough uranium to make a nuclear weapon.

Gantz, asked about efforts by the Biden administration to get back to an agreement with Iran, said: “The current U.S. approach of putting the Iran nuclear program back in a box, I’d accept that.”

He added that Israel would want to see a “viable U.S.-led plan B” that includes broad economic pressure on Iran in case the talks fail. And he gestured at Israel’s own “plan C,” which would involve military action.

Gantz estimated that Iran was two to three months away from having the materials and capabilities to produce one nuclear bomb. Iran has steadily ramped up its nuclear work since the United States withdrew from the deal, despite a so-called maximum pressure campaign advanced by Trump and Netanyahu that included sanctions and sabotage efforts.

#### Can’t stay contained—multiple pathways to global nuclear war.

Avery 13 – Lektor Emeritus & Associate Professor, U of Copenhagen

John Scales Avery, Lektor Emeritus, Associate Professor, at the Department of Chemistry, University of Copenhagen, since 1990 he has been the Contact Person in Denmark for Pugwash Conferences on Science and World Affairs, An Attack On Iran Could Escalate Into Global Nuclear War, 11/6/13, http://www.countercurrents.org/avery061113.htm

Despite the willingness of Iran's new President, Hassan Rouhani to make all reasonable concessions to US demands, Israeli pressure groups in Washington continue to demand an attack on Iran. But such an attack might escalate into a global nuclear war, with catastrophic consequences. As we approach the 100th anniversary World War I, we should remember that this colossal disaster escalated uncontrollably from what was intended to be a minor conflict. There is a danger that an attack on Iran would escalate into a large-scale war in the Middle East, entirely destabilizing a region that is already deep in problems. The unstable government of Pakistan might be overthrown, and the revolutionary Pakistani government might enter the war on the side of Iran, thus introducing nuclear weapons into the conflict. Russia and China, firm allies of Iran, might also be drawn into a general war in the Middle East. Since much of the world's oil comes from the region, such a war would certainly cause the price of oil to reach unheard-of heights, with catastrophic effects on the global economy. In the dangerous situation that could potentially result from an attack on Iran, there is a risk that nuclear weapons would be used, either intentionally, or by accident or miscalculation. Recent research has shown that besides making large areas of the world uninhabitable through long-lasting radioactive contamination, a nuclear war would damage global agriculture to such an extent that a global famine of previously unknown proportions would result. Thus, nuclear war is the ultimate ecological catastrophe. It could destroy human civilization and much of the biosphere. To risk such a war would be an unforgivable offense against the lives and future of all the peoples of the world, US citizens included.

#### Saudi will follow them across the nuclear threshold---nuclear war.

Robb et. al 12 (Senator Charles S. – Virginia, General Charles Wald – Former Deputy Commander of U.S. European Command, Dr. Daniel Ahn – Senior Economist and Head of Portfolio Strategy for CitiBank New York, John Hannah – Former Assistant for National Security Affairs to the Vice President, Stephen Rademaker – Former Assistant Secretary of State for Arms Control and Nonproliferation, Christopher Carney – former U.S. Representative from Pennsylvania, Ed Husain – Senior Fellow for Middle Eastern Studies at the Council on Foreign Relations, Ambassador Dennis Ross – Counselor for the Washington Institute for Near East Policy, Ambassador Eric Edelman – Former Under Secretary of Defense for Policy, Reuben Jeffrey III – Former U. S. Under Secretary of State for Economic, Business, and Agricultural Affairs, John Tanner – Former U.S. Representative from Tennessee, Secretary Dan Glickman – Senior Fellow at the Bipartisan Policy Center, Admiral Gregory Johnson – Former Commander of U.S. Naval Forces, Europe, Mortimer Zuckerman – CEO and Chairman of the Board of Directors for Boston Properties, Inc., Larry Goldsetin – Founder of Energy Policy Research Foundation, Inc., and General Ron Keys – Former Commander of the Air Combat Command, The Price of Inaction: Analysis of Energy and Economic Effects of a Nuclear Iran, Bipartisan Policy Center, p. 24)

Saudi Arabia would be very likely to try to follow Iran across the nuclear threshold. Should it do so, the world would face the possibility of an Iran-Saudi nuclear exchange—a catastrophic humanitarian event that would threaten the entirety of Gulf oil exports for an extended period of time. In early 2008, the Senate Foreign Relations Committee concluded: “If Iran obtains a nuclear weapon, it will place tremendous pressure on Saudi Arabia to follow suit.”19 By 2012, some experts believe it has already begun to do so. Two main factors could drive Saudi Arabia to pursue a nuclear weapon: (1) a decades-long Saudi-Iran cold war waged along sectarian, religious, ethnic, and geopolitical lines and (2) a deep-seated competition over the energy policies that form the lifeblood of both regimes. The Sunni Saudi monarchy and Shiite Iranian theocracy each claim leadership of the Islamic world. This sectarian competition for primacy is reinforced by ethnic differences: Saudi Arabia is the largest and most populous Arab country astride the Gulf, but it is dwarfed by Iran’s much larger Persian-majority population. These competing claims have pitted the two countries in an enduring cold war and proxy conflict spanning from Lebanon to Iraq and the Arabian Peninsula. Iran—under both the Shah and the ayatollahs—has routinely sought to use its conventional military capabilities, large population, geostrategic position, expansive resources, and ties to armed groups to shift the balance of power in the Persian Gulf in its favor and at the expense of its Sunni Arab neighbors.20 As a result, Saudi Arabia has made it clear it views a nuclear-capable Iran as an existential threat. In 2008, King Abdullah urged the United States to “cut off the head of the snake,” one instance of his “frequent exhortations [to] the United States to attack Iran to put an end to its nuclear weapons program,” according to U.S. diplomatic cables revealed by Wikileaks.21 With uncertain prospects for a halt to Iran’s nuclear program—peaceful or otherwise—in 2009, the King informed a senior American official, “If [Iran] gets nuclear weapons, we will get nuclear weapons.” This year, senior Saudi officials reiterated that “it would be completely unacceptable to have Iran with a nuclear capability and not the kingdom [of Saudi Arabia].”22 Rather than lose time developing an indigenous nuclear program, it is likely the Saudi kingdom would seek to obtain a nuclear warhead from Pakistan ready to mount on its CSS-2 ballistic missiles. Close Saudi-Pakistani security ties date back to shared Cold War–era interests, and it is widely believed that Riyadh bankrolled Islamabad’s nuclear weapons program with the stipulation that Pakistan would sell nuclear devices to Saudi Arabia in an emergency; in the words of a senior Saudi official, “within weeks.”23 Pakistan would benefit by receiving much-needed cash and could demand in return dual-key authority over missile launches, both to control Saudi policy and to bolster its own secondstrike capability against India. At best, this would create a nuclear-armed standoff between the two most powerful and mutually antagonistic countries in the Persian Gulf. At worst, it could devolve into atomic warfare. Iran’s and Saudi Arabia’s small arsenals, lack of durable communication channels, poor civilian oversight of command-and-control systems, erratic intelligence, proximity to each other, religious ardor, and sectarian divide would all distinguish this scenario from the Cold War balance between the United States and the Soviet Union. Any such conflict would likely be extremely devastating. Each country would have natural incentives to cripple its opponent’s oil facilities in any nuclear conflict. Crudeoil exports are both regimes’ political and economic lifeblood, and thus the basis for their military power. Also, each country’s oil infrastructure and export terminals are concentrated along the Gulf, within range of the other’s nuclear-weapons delivery vehicles. Moreover, a nuclear war in this region would likely not only destroy a large portion of the Gulf’s oil infrastructure but also render the entire Gulf unavailable to shipping for some period of time. This could come directly through radioactive fallout, atmospheric pollution, and environmental destruction, or indirectly through prohibitively high insurance rates and other risk factors for tankers transiting the region.24 Therefore, even if a nuclear exchange did not spread into a region-wide war, the transit of Hormuz-bound oil exports would be halted by such a conflict.

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

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

More Creative Alternatives

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

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

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

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

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

a. Enabling Competition Within the Platform

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

over 15,500 members.357

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

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

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

### 1AC---Plan

Plan---

#### The United States federal government should prohibit platform conduct that fails under rule of reason without imposing heightened burdens on plaintiffs.

#### The aff removes *Amex*’s increased burdens for platform challenges—that solves because well-plead cases go forward and courts will reject anticompetitive conduct

Hovenkamp, Assistant Professor, USC Gould School of Law, ‘19

(Erik, “Platform Antitrust,” 44 J. Corp. L. 713)

That is no longer the case, however, as the Supreme Court recently confronted platform commerce head-on in AmEx 111.13 In June of 2018, the Court issued its first decision on how antitrust's rule of reason 14 is to be applied in cases involving platform defendants. 15 It was superficially a question of how to define the "relevant market" for purposes of an antitrust adjudication. 1 6 In particular, the question was whether the market definition must include both groups of users, which would require a plaintiff to prove a net injury to competition across both user groups-not just to win on the merits, but simply to carry its initial burden. The Supreme Court held that it does. 17

Most of the important complexities arising under two-sided competition center on the juxtaposition of countervailing effects-that is, pro and anticompetitive effects-arising within the separate sides of the market. In fact, even outside the platform context, such a juxtaposition of plausible effects is very common in antitrust disputes. And the rule of reason ordinarily divides the burdens of establishing them; it bifurcates them into separate stages, delaying the need for potential balancing or "netting out" of the effects (which is notoriously difficult) until the final stage of the adjudication. By evaluating the effects carefully and independently, a court is better equipped to determine whether such balancing is genuinely necessary; and, if so, the court is at least in a better position to compare the relevant effects. However, the Court's AmEx III decision largely abandoned this burdenshifting framework, effectively collapsing the entire rule of reason analysis-and all of its intermediate inquiries-into the plaintiffs initial burden.

Whether or not one agrees with its holding, the AmEx III decision is inarguably a watershed moment for platform antitrust. Against this backdrop, this Article considers how antitrust ought to accommodate the distinctive features of platforms and platform competition. It focuses principally on conduct evaluated under the rule of reason, 18 with emphasis on vertical restraints and unilateral conduct. 19 The analysis is organized as follows: I begin by providing an overview of the distinctive features of platforms and platform competition, as reflected within the platform economics literature. Part III then explains how such factors may bear on the analysis of various restrictive practices that are already familiar within antitrust, but whose effects may become more or less concerning when undertaken by two-sided defendants. In Part IV, I address the economic effects of an important category of restraints that are unique to platform markets. Finally, Part V turns to the broad question of law that was at issue in AmEx III.

One of the important competitive dynamics arising in platform markets is known as "steering." 21 This refers to any efforts aimed at inducing users to opt for one platform over another. The restraint at issue in AmEx IIIwas an example of this: it prohibits its merchants from offering AmEx cardholders a better price at checkout if they agree to switch to an alternative card (e.g. Visa), since competing cards generally charge lower network usage fees to merchants. 22 But, more generally, steering restraints take many different forms, and arise in many platform markets. 3 In general, steering strategies are usually procompetitive, as they typically act as a vehicle for price competition among rival platforms. Restraints on steering should therefore be regarded as a potential source of serious antitrust concerns. However, as discussed in detail in Part III, many research articles suggest that such restraints may be necessary to maintain adequate participation, and thus regard their welfare effects as highly ambiguous. 24 The AmEx III opinion cites these commentaries copiously. Importantly, however, these arguments stem primarily from economic models involving a platform monopolist, with the operative restraint merely precluding efforts to steer users toward a nonpla'fform alternative (e.g. toward cash rather than using a monopolist's payment card platform). 25 But this is not a good representation of how such restraints usually operate in real-world commerce. In practice, most of the relevant restraints seek to prevent steering toward competing platforms, rather than a nonplatform alternative that lacks the same transactional efficiencies.

As I argue below, when a restraint merely prevents steering toward competing platforms, there is substantially less reason to presume that it might be justified for reasons relating to the market's two-sidedness. Instead, the more likely result is simply that it prevents users from switching to rival platforms that would provide them with better jointvalue. That would suggest the restraint does not enhance the market-wide volume of trade. Rather, at best, it merely reallocates transactions among platforms, albeit in a way that leaves transacting parties with diminished welfare on average. At worst, it affirmatively reduces the overall volume of trade by undermining price competition generally. This can occur for two reasons. First, the restraint may extinguish rival platforms' incentive to make competitive price offerings, as it may prevent transacting parties from switching to the competitor's platform in response to its price cut. Second, the restraint may induce sellers who transact over the platform to set higher retail prices for their own wares, which injures all consumers, whether or not they take advantage of the platform's transaction service.

The question of law addressed in AmEx III is extremely broad in scope, as it bears on the application of antitrust law to all kinds of restrictive practices that might be undertaken by transaction platforms. As noted above, while facially a holding about market definition, the Supreme Court's decision is in fact a major alteration of the rule of reason's burden shifting framework. The Court's analysis was guided principally by a number of antitrust academics that focus most of their attention on a simple point-in effect that "both sides matter," and that it would be inappropriate to focus on one side myopically. 26 While correct, this point was actually never in dispute. Even the district court, whose market definition was formally limited to the merchant side of the market, 27 expressly emphasized the importance of accounting for the market's two-sidedness. 28 Indeed, its analysis gives substantial attention to cardholders, and it even concluded that they were likely injured in addition to merchants. 2 9 Despite this, the AmEx III majority chastised the district court's approach as "looking at only one side of the platform in isolation."' 30

It is indeed true that a platform's conduct may have countervailing effects within the two sides, and that this requires courts to take the market's two-sidedness into account. 31 But it does not follow that the appropriate way to deal with this is to require a plaintiff to "net out" all such considerations merely in order to support its prima facie case-before the defendant has substantiated its asserted efficiency defense. This approach is also a substantial deviation from precedent. Most difficult cases evaluated under the rule of reason involve potential countervailing pro- and anticompetitive effects. 32 And the courts developed a multi-stage burden shifting framework precisely to deal with this difficulty. By construction, this framework contemplates that a plaintiff can carry its initial burden without having shown that the defendant's conduct is definitively anticompetitive on the whole; that is why it is merely the first stage among several.

Far from providing any necessary reform, the AmEx III decision merely developed a "law of the horse": a needless construction of new legal principles when the old ones would do just fine (and likely much better).33 It is true that platform economics has important implications for antitrust policy and practice; this Article gives substantial attention to that fact. But such considerations can already be accounted for-both more practicably and more reliably-within the rule of reason's existing structure. To that end, a much better approach would be to maintain careful consideration of platform economics throughout the established burden shifting framework, which is designed to work through complex cases in incremental steps and to cast light on countervailing effects through an efficient allocation of burdens.

#### The aff is goldilocks – it remedies type II errors because it is POSSIBLE for plaintiffs to win, but caps type I error because most would still be dismissed

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(Erik, “Platform Antitrust,” 44 J. Corp. L. 713)

C. Plaintiffs Already Bear the Burden on Balancing

Balancing anticompetitive effects against procompetitive efficiencies is notoriously challenging. 196 It is intuitively sensible that, if there are countervailing welfare effects, the burden ought to be on the plaintiff to establish that the balance of effects results in a net injury. But it is incorrect to presume that the AmEx III decision-which requires balancing right out of the gates-was necessary to achieve this result.

Recall that, if the defendant establishes a procompetitive justification and the plaintiff fails to identify a less restrictive alternative, then the court must attempt to balance the countervailing effects. Here, the plaintiff carries the burden of persuasion by virtue of its underlying obligation to prove an anticompetitive effect by a preponderance of evidence. 1 9 7 As such, the rule of reason already ensures that the plaintiff bears the ultimate burden as to the balance of countervailing effects. But, critically, the usual approach delays the balancing inquiry until such time as the court can be sure it is necessary-namely, until after the defendant has established a significant efficiency that might warrant balancing.

Most rule of reason cases resolve before reaching the balancing stage. 198 However, this is in part due to the fact that a large majority of cases end at the first stage, with plaintiffs failing to make a prima facie case. 199 Michael Carrier finds that, between 1999 and 2009, plaintiffs fail at the first stage in 97% of rule of reason cases. 2 0 Further, 'there was only one final judgment issued in a plaintiff's favor over that period (out of 222 total judgments). Thus, given that the burden of establishing a prima facie case *without* balancing is already highly demanding, we would hardly stack the deck against defendants by continuing to reserve the balancing analysis for the final stage.

Everyone agrees that platform economics makes matters more complicated, which does indeed increase the concern that courts might err in attempting to resolve the balance of countervailing effects. But the maximal possible number of type 1 errors is capped by the number of judgments issued in plaintiffs' favor. And that number is already miniscule under the traditional burden shifting rules. As such, there simply isn't any room for a large swath of plaintiff-favoring errors, because plaintiffs almost never win in the first place.

### 1AC---Conduct

Advantage 2 is Conduct---

#### The full scope of *Amex* is unclear—companies will exploit it to misuse their platforms—that’s effectively impossible to police

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(Lina, “The Supreme Court just quietly gutted antitrust law,” July 3, <https://www.vox.com/the-big-idea/2018/7/3/17530320/antitrust-american-express-amazon-uber-tech-monopoly-monopsony>)

Antitrust laws have never permitted monopolistic firms to wield their market power against one set of customers so long as they benefit another set of players. Yet this kind of “balancing” is exactly what the Second Circuit ratified. Consider: Under the logic the appeals court used, an anticompetitive scheme by Uber to suppress driver income would not be considered illegal unless those bringing the suit showed that riders were also harmed.

What’s more, the court said, plaintiffs have to meet this new burden at the very earliest stage of litigation.

Last Monday, a 5-4 majority on the Supreme Court upheld that approach. Not only does the decision show stunning disregard for core elements of antitrust law, it carelessly mangles long-accepted legal rules along the way to establishing its position. Perhaps most strikingly, it overrides or ignores facts established by the district court.

For example, the Supreme Court states that AmEx’s increased merchant fees reflect “increases in the value of its services,” even though the lower court expressly found that AmEx’s price hikes exceeded the value of the cardholder rewards.

In practice, the Court has shielded from effective antitrust scrutiny a huge swath of firms that provide services on more than one side of a transaction — and, in today’s digital economy, there are many (as Justice Stephen Breyer noted in a dissent he read from the bench to emphasize his concerns).

Worse yet, the Court left unclear what kinds of businesses actually qualify for this new rule. As the Open Markets Institute, for which I work, explained in an amicus brief, deciding an antitrust case using the amorphous concept of a “two-sided” market will incentivize all sorts of companies to seek protection under this bad new theory.

What kinds of companies might have more freedom to exert pressure on customers, as a result of this decision? Not newspapers, the Court said: Readers are “largely indifferent” to the number of advertisements on newspaper pages, even though advertisers are looking to reach readers. So someone suing a newspaper on antitrust grounds (say, for prohibiting advertisers from doing business with other newspapers) would not have to prove that a newspaper’s conduct harmed both readers and advertisers.

On the surface, the Court’s language suggests that the special rule would apply to Amazon’s marketplace for third-party merchants, to eBay, and to Uber — but not to Google search or Facebook. Indeed, the Justice Department’s antitrust division chief, Makan Delrahim, has also come to this conclusion about the scope of the decision. But the Court’s opinion hardly delivers a clear and workable standard for judges to go by.

One can imagine the reams of studies Google would commission to show that targeting users with advertising did indeed amount to a “transaction” with users that users highly valued — a showing that, if successful, would likely qualify it for the shield of the special rule. If so, Google might be able to impose exclusionary contracts on advertisers and significantly boost the prices it charges them. Amazon, meanwhile, can continue to squeeze the suppliers and retailers reliant on its platform with little worry about being charged with the abuse of monopsony power.

Federal judges generally lack the expertise needed to independently assess the hyper-complex economic studies that this new rule will spur. Rather than focusing on the conduct between a company and one set of its customers, the new rule requires a much more involved showing.

#### *Amex* undermines enforcement against nascent acquisitions

Salop, Professor of Economics & Law, Georgetown University Law Center and Senior Consultant, Charles River Associates, ‘21

(Steven, “Dominant Digital Platforms: Is Antitrust Up to the Task?” yalelawjournal.org/pdf/SalopEssay\_rnon2ejq.pdf)

This most recent agency loss involved an acquisition by a dominant digital platform. Sabre is a digital platform that permits airlines to post schedules, fares and seat availability and allows travel agents to access this information, make travel bookings and pay for them. Sabre proposed to acquire Farelogix, which provides technology to airlines. This technology allows an airline to disintermediate Sabre by allowing the airline to connect directly to travel agencies and provide travel agencies with information and ticket-booking services itself. Thus, this acquisition was analytically like a vertical merger, where Farelogix sells a critical input (i.e., its technology) to airlines, which they use to compete with Sabre for the business of travel agents. The competitive concern is that Sabre would foreclose airlines’ ability to acquire the Farelogix technology input.

Perhaps attempting to exploit the horizontal-merger structural presumption and avoid the difficulties they faced in AT&T/Time Warner, the DOJ did not litigate the case as a vertical merger. Instead, the complaint alleged that Sabre and Farelogix competed in the provision of booking services for airline tickets sold through travel agencies. This competition is indirect, resulting from Farelogix working with the individual airlines to disintermediate Sabre. However, the trial court did not miss the point. It observed that “Sabre and Farelogix view each other as competitors” and found that “the record reflects competition between Sabre’s and Farelogix’s direct connection solutions for airlines.”94

Having concluded that competition was reduced by the merger, the trial court nonetheless rejected the DOJ’s complaint on the grounds that Farelogix and Sabre do not compete in the two-sided platform market.95 While Sabre provides services to customers on both sides (i.e., to both airlines and travel agencies), Farelogix provides services to only one side (i.e., to airlines, but not to travel agencies). The travel agency services are provided by the airlines themselves, using the Farelogix technology.

This approach was both defective and unnecessary because Sabre competed with the combination of Farelogix and the airlines.96 Yet the court thought that American Express compelled the opposite result, despite its own fact-finding and the vertical nature of the transaction. If other U.S. courts similarly follow this same defective approach, the result will be underdeterrence of anticompetitive acquisitions by digital platforms.97 Indeed, this approach would lead to ludicrous results. Under this reasoning, Microsoft could have legally ended the competitive threat from Netscape and Java simply by acquiring them instead of trying to destroy them.

#### Prospect of big tech acquisition dampens innovation

Allensworth, Professor of Law at Vanderbilt Law School, ‘21

(Rebecca, “Antitrust’s High-Tech Exceptionalism,” 130 Yale L.J. 588)

E. Whither Innovation?

As a theoretical matter, big tech’s refusals to deal and predatory copying suppress innovation. A retailer with a new idea for a household product will be less inclined to invest in producing it if he knows Amazon can appropriate the returns. A developer with a better “app for that” will be less likely to bring it to market if she believes Apple or Facebook might someday remove it from their platforms. And if a rival search company cannot hope to keep its data private from Google, it will not invest in building a better search engine to try to take on the giant.

Whether big tech stifles innovation as an empirical matter is less clear, but there is anecdotal evidence that it does. During a recent hearing following the House Judiciary Committee’s investigation into competition abuses among high-tech firms, Representative Cicilline read a quote that he said was typical of the entrepreneurs he interviewed: “If someone came to me with an idea for a website or a web service today, I’d tell them to run. Run as far away from the web as possible.”111 Venture capital, while booming overall,112 is shy about funding projects that might compete with Big Tech. The best-case scenario for a start-up is acquisition by one of the big four—a lucrative payday, for sure, but nothing compared to what could come from actually toppling a dominant firm. This puts a ceiling on the upside, and with the ever-present risk of failure, it likely leads to under-investment in new ideas. As one funder put it, “[w]e don’t touch anything that comes too close to Facebook, Google or Amazon.”113

CONCLUSION: “ANTITRUST IS GREEDY”

The promise that we saw in high tech during its first boom—that it would change the way we work, communicate, shop, and play—has largely been realized. Few can argue with the efficiencies that digital communication and commerce have brought to our lives and markets. But, as Professor Herbert Hovenkamp has said, “antitrust is greedy.”114 It wants not only efficiency in end products, but efficiency in the competitive process that brings them about. During the dot-com era, American antitrust institutions became enthralled with the idea that encouraging the development of dynamic, innovative products required compromising our commitment to dynamic, innovative markets. That compromise contributed—in a way that is often overlooked—to the current competition crisis in big tech.

#### SCENARIO ONE IS AI:

#### AI acquisitions have increased six-fold.

CB Insights ’19 – data analytics company [CB Insights; private company with a business analytics platform and global database that provides market intelligence on private companies and investor activities, targeted at private equity, venture capital, investment banking, angel investing, and consulting professionals by providing insights about high growth private companies; 9-17-2019; "The Race For AI: Here Are The Tech Giants Rushing To Snap Up Artificial Intelligence Startups"; CB Insights; https://www.cbinsights.com/research/top-acquirers-ai-startups-ma-timeline/; accessed 8-15-2021]

Artificial intelligence has long been a major focus for tech leaders across industries. Big corporations across every sector, from retail to agriculture, are trying to integrate machine learning into their products. At the same time, there is an acute shortage of AI talent.

This combination is fueling a heated race to scoop up top AI startups, many of which are still in the early stages of research and funding.

Below, we dig into AI acquisition trends, from which companies are the most acquisitive to what areas of focus are attracting the most attention.

TECH GIANTS LEAD IN AI ACQUISITIONS

The usual suspects are leading the race for AI: tech giants like Facebook, Amazon, Microsoft, Google, & Apple (FAMGA) have all been aggressively acquiring AI startups in the last decade.

Among the FAMGA companies, Apple leads the way, making 20 total AI acquisitions since 2010. It is followed by Google (the frontrunner from 2012 to 2016) with 14 acquisitions and Microsoft with 10.

Apple’s AI acquisition spree, which has helped it overtake Google in recent years, was essential to the development of new iPhone features. For example, FaceID, the technology that allows users to unlock their iPhone X just by looking at it, stems from Apple’s M&A moves in chips and computer vision, including the acquisition of AI company RealFace.

In fact, many of FAMGA’s prominent products and services came out of acquisitions of AI companies — such as Apple’s Siri, or Google’s contributions to healthcare through DeepMind.

That said, tech giants are far from the only companies snatching up AI startups.

Since 2010, there have been 635 AI acquisitions, as companies aim to build out their AI capabilities and capture sought-after talent (as of 8/31/2019).

The pace of these acquisitions has also been increasing. AI acquisitions saw a more than 6x uptick from 2013 to 2018, including last year’s record of 166 AI acquisitions — up 38% year-over-year.

In 2019, there have already been 140+ acquisitions (as of August), putting the year on track to beat the 2018 record at the current run rate.

#### Tech behemoths won’t take DOD contracts. Antitrust would encourage smaller firms to develop AI for the sole purpose of defense needs.

Foster and Arnold ’20 – Researchers at ***Georgetown’s*** Center for Security and Emerging Technology [Dakota; Visiting Researcher at Georgetown’s Center for Security and Emerging Technology, graduate student in the Department of War Studies at King’s College London, conducted research on terrorism and U.S. national security policy for the U.S. military, the House Foreign Affairs Committee, and the Washington Institute; Zachary; Research Fellow at Georgetown’s Center for Security and Emerging Technology, where he focuses on AI investment flows and workforce trends, J.D. from Yale Law School; 2020; "Antitrust and Artificial Intelligence: How Breaking Up Big Tech Could Affect the Pentagon’s Access to AI"; Center for Security and Emerging Technology at Georgetown University; https://www.geopolitic.ro/wp-content/uploads/2020/05/CSET-Antitrust-and-Artificial-Intelligence.pdf; accessed 8-10-2021]

3. Are smaller vendors more likely to produce innovative products that meet the Pentagon’s needs?

Tech industry leaders have relatively **little incentive** to work with the Pentagon. Their companies already enjoy **broad customer bases** and financial independence from U.S. government contracts—including those **at the Pentagon**.89 DOD contracts involve **applying** AI technology in varied, complex, and **operationally demanding** environments with **low tolerance** for error. Similarly, industry has **little motivation** to take on unique DOD **data management** and privacy requirements, such as data compartmentalization, protection against deceptive or compromised data inputs, and strict **data accountability** provisions complicating **algorithm training**.90 Finally, some commercial AI advances will easily convert into Pentagon applications. Others will require significant, difficult adaption and productization.

Antitrust action could create **smaller AI firms** targeting DOD business as their “**niche**.” With the Pentagon as their **sole customer**, these firms could focus on its unique needs, tailoring broader AI innovations for the Pentagon through **productization** and **organizational adaptation**. They could follow the example of **Palantir**, which makes 50 percent of its revenue from **government contracts**,91 or Kratos (60 percent).92 In the last five years, a **number of companies** have emerged in this mold, including Anduril Labs (2017), Shield AI (2015), Descartes Labs (2014), and Uptake (2014). As smaller firms’ primary, high-value customer, the Pentagon can **dictate** their innovation objectives, ultimately yielding AI applications better suited to **defense needs**.

#### Military AI ushers in the erosion of conventional deterrence – developing it is necessary to prevent great power wars.

Brose ’19 – Senior Fellow at the Carnegie Endowment for International Peace [Christian; Senior Fellow at the Carnegie Endowment for International Peace; 2019; "The New Revolution in Military Affairs"; Foreign Affairs; <https://www.foreignaffairs.com/articles/2019-04-16/new-revolution-military-affairs>]

The idea of a future military revolution became discredited amid nearly two decades of war after 2001 and has been further damaged by reductions in defense spending since 2011. But along the way, the United States has also **squandered** hundreds of **billions** of dollars trying to modernize in the **wrong ways**. Instead of thinking systematically about buying faster, more **effective kill chains** that could be built now, Washington poured **money** into **newer versions** of **old military platforms** and **prayed** for **technological miracles** to come (which often became acquisition debacles when those miracles did not materialize). The result is that U.S. battle networks are not nearly as **fast** or **effective** as they have appeared while the United States has been fighting lesser opponents for almost three decades.

Yet if ever there were a time to **get serious** about the coming revolution in **military affairs**, it is **now**. There is an emerging consensus that the United States' top **defense-planning priority** should be **contending** with **great powers** with **advanced militaries**, primarily **China**, and that **new technologies**, once intriguing but speculative, are now both **real** and **essential** to **future military advantage**. Senior military leaders and defense experts are also starting to agree, albeit belatedly, that when it comes to these threats, the United States is **falling dangerously behind**.

This reality demands more than a revolution in technology; it requires a revolution in thinking. And that thinking must focus more on how the U.S. military fights than with what it fights. The problem is not **insufficient spending** on defense; it is that the U.S. military is being countered by **rivals** with **superior strategies**. The United States, in other words, is playing a **losing game**. The question, accordingly, is not how **new technologies** can improve the U.S. military's ability to do what it already does but how they can enable it to operate in **new ways**. If American defense officials do not answer that question, there will still be a **revolution in military affairs**. But it will primarily **benefit others**.

It is still possible for the United States to adapt and succeed, but the scale of change required is enormous. The **traditional model** of U.S. **military power** is being **disrupted**, the way Blockbuster's business model was amid the rise of Amazon and Netflix. A military made up of **small numbers** of **large**, **expensive**, **heavily manned**, and **hard-to replace** systems will not **survive** on **future battlefields**, where swarms of **intelligent machines** will deliver violence at a **greater volume** and **higher velocity** than **ever before**. Success will require a **different kind of military**, one built around **large numbers** of **small**, **inexpensive**, **expendable**, and **highly autonomous** systems. The United States has the money, human capital, and technology to assemble that kind of military. The question is whether it has the imagination and the resolve.

NEW TECHNOLOGIES, OLD PROBLEMS

**Artificial intelligence** and other emerging technologies will change the way **war is fought**, but they will not change its nature. Whether it involves longbows or source code, war will always be violent, politically motivated, and composed of the same three elemental functions that new recruits learn in basic training: move, shoot, and communicate.

Movement in warfare entails hiding and seeking (attackers try to evade detection; defenders try to detect them) and penetrating and repelling (attackers try to enter opponents’ space; defenders try to deny them access). But in a world that is becoming one giant sensor, hiding and penetrating—never easy in warfare—will be far more difficult, if not impossible. The amount of data generated by networked devices, the so-called Internet of Things, is on pace to triple between 2016 and 2021. More significant, the proliferation of low-cost, commercial sensors that can detect more things more clearly over greater distances is already providing more real-time global surveillance than has existed at any time in history. This is especially true in space. In the past, the high costs of launching satellites required them to be large, expensive, and designed to orbit for decades. But as access to space gets cheaper, satellites are becoming more like mobile phones—mass-produced devices that are used for a few years and then replaced. Commercial space companies are already fielding hundreds of small, cheap satellites. Soon, there will be thousands of such satellites, providing an unblinking eye over the entire world. Stealth technology is living on borrowed time.

On top of all of that, quantum sensors—which use the bizarre properties of subatomic particles, such as their ability to be in two different places at once—will eventually be able detect disruptions in the environment, such as the displacement of air around aircraft or water around submarines. Quantum sensors will likely be the first usable application of quantum science, and this technology is still many years off. But once quantum sensors are fielded, there will be nowhere to hide.

The future of movement will also be characterized by a return of mass to the battlefield, after many decades in which the trend was moving in the opposite direction—toward an emphasis on quality over quantity—as technology is enabling more systems to get in motion and stay in motion in more places. Ubiquitous sensors will generate exponentially greater quantities of data, which in turn will drive both the development and the deployment of artificial intelligence. As machines become more autonomous, militaries will be able to field more of them in smaller sizes and at lower costs. New developments in power generation and storage and in hypersonic propulsion will allow these smaller systems to travel farther and faster than ever. Where once there was one destroyer, for example, the near future could see dozens of autonomous vessels that are similar to missile barges, ready to strike as targets emerge.

Technology will also transform how those systems remain in motion. Logistics—the ability to supply forces with food, fuel, and replacements—has traditionally been the limiting factor in war. But autonomous militaries will need less fuel and no food. Advanced manufacturing methods, such as 3-D printing, will reduce the need for vast, risky, and expensive military logistics networks by enabling the production of complicated goods at the point of demand quickly, cheaply, and easily.

In an even more profound change, space will emerge as its own domain of maneuver warfare. So far, the near impossibility of refueling spacecraft has largely limited them to orbiting the earth. But as it becomes feasible to not just refuel spacecraft midflight but also build and service satellites in space, process data in orbit, and capture resources and energy in space for use in space (for example, by using vast solar arrays or mining asteroids), space operations will become less dependent on earth. Spacecraft will be able to maneuver and fight, and the first orbital weapons could enter the battlefield. The technology to do much of this exists already.

THE MILITARIES OF TOMORROW

Technology will also radically alter how militaries shoot, both literally and figuratively. Cyberattacks, communication jamming, electronic warfare, and other attacks on a system’s software will become as important as those that target a system’s hardware, if not more so. The rate of fire, or how fast weapons can shoot, will accelerate rapidly thanks to new technologies such as lasers, high-powered microwaves, and other directed-energy weapons. But what will really increase the rate of fire are intelligent systems that will radically reduce the time between when targets can be identified and when they can be attacked. A harbinger of this much nastier future battlefield has played out in Ukraine since 2014, where Russia has shortened to mere minutes the time between when their spotter drones first detect Ukrainian forces and when their precision rocket artillery wipes those forces off the map.

The militaries of the future will also be able to shoot farther than those of today. Eventually, hypersonic munitions (weapons that travel at more than five times the speed of sound) and space-based weapons will be able to strike targets anywhere in the world nearly instantly. Militaries will be able to attack domains once assumed to be sanctuaries, such as space and logistics networks. There will be no rear areas or safe havens anymore. Swarms of autonomous systems will not only be able to find targets everywhere; they will also be able to shoot them accurately. The ability to have both quantity and quality in military systems will have devastating effects, especially as technology makes lethal payloads smaller.

Finally, the way militaries communicate will change drastically. Traditional communications networks—hub-and-spoke structures with vulnerable single points of failure—will not survive. Instead, technology will push vital communications functions to the edge of the network. Every autonomous system will be able to process and make sense of the information it gathers on its own, without relying on a command hub. This will enable the creation of radically distributed networks that are resilient and reconfigurable.

Technology is also inverting the current paradigm of command and control. Today, even a supposedly unmanned system requires dozens of people to operate it remotely, maintain it, and process the data it collects. But as systems become more autonomous, one person will be able to operate larger numbers of them single-handedly. The opening ceremonies of the 2018 Winter Olympics, in South Korea, offered a preview of this technology when 1,218 autonomous drones equipped with lights collaborated to form intricate pictures in the night sky over Pyeongchang. Now imagine similar autonomous systems being used, for example, to overwhelm an aircraft carrier and render it inoperable.

Further afield, other technologies will change military communications. Information networks based on 5G technology will be capable of moving vastly larger amounts of data at significantly faster speeds. Similarly, the same quantum science that will improve military sensors will transform communications and computing. Quantum computing—the ability to use the abnormal properties of subatomic particles to exponentially increase processing power—will make possible encryption methods that could be unbreakable, as well as give militaries the power to process volumes of data and solve classes of problems that exceed the capacity of classical computers. More incredible still, so-called brain-computer interface technology is already enabling human beings to control complicated systems, such as robotic prosthetics and even unmanned aircraft, with their neural signals. Put simply, it is becoming possible for a human operator to control multiple drones simply by thinking of what they want those systems to do.

Put together, all these technologies will displace decades-old, even centuries-old, assumptions about how militaries operate. The militaries that embrace and adapt to these technologies will dominate those that do not. In that regard, the U.S. military is in big trouble.

A LOSING GAME

Since the end of the **Cold War**, the United States' approach to **projecting military force** against regional powers has rested on a series of **assumptions** about how conflicts **will unfold**. The U.S. military assumes that its forces will be able to move **unimpeded** into forward positions and that it will be able to **commence hostilities** at a time of **its choosing**. It assumes that its forces will operate in **permissive environments**-that adversaries will be **unable to contest** its **freedom of movement** in any domain. It assumes that **any quantitative advantage** that an adversary may possess will be **overcome** by its own **superior ability** to **evade** detection, **penetrate** enemy defenses, and **strike targets**. And it assumes that U.S. forces will suffer **few losses** in combat.

These **assumptions** have led to a force built around relatively **small numbers** of **large**, **expensive**, and **hard-to-replace** systems that are optimized for moving undetected close to their targets, shooting a limited number of times but with extreme precision, and communicating with impunity. Think stealth aircraft flying right into downtown Belgrade or Baghdad. What's more, systems such as these depend on **communications**, **logistics**, and **satellite networks** that are almost **entirely defenseless**, because they were designed under the **premise** that no adversary would ever be able to **attack them.**

This military enterprise and its underlying suppositions are being called into question. For the past two decades, while the United States has focused on **fighting wars** in the **Middle East**, its competitors-especially **China**, but also **Russia**-have been dissecting its way of war and **developing** so-called anti-access/area-denial (or A2/AD) capabilities to **detect U.S. systems** in **every domain** and **overwhelm them** with large salvos of precision fire. Put simply, U.S. rivals are fielding **large quantities** of **multimillion-dollar weapons** to destroy the United States' **multibillion-dollar military** systems.

China has also begun work on **megaprojects** designed to **position it** as the **world leader** in **artificial intelligence** and other advanced technologies. This undertaking is not exclusively military in its focus, but every one of these **advanced-technology megaprojects** has **military applications** and benefits the **People's Liberation Army** under the doctrine of "**military-civil fusion**." Whereas the U.S. military still largely treats its data like engine exhaust-a **useless byproduct**-China is moving with **authoritarian zeal** to stockpile its data like **oil**, so that it can power the **autonomous** and **intelligent** military systems it sees as **critical** to **dominance** in **future warfare**.

The United States' position, **already dire**, is **rapidly deteriorating**. As a 2017 report from the rand Corporation concluded, "U.S. forces could, under plausible assumptions, lose the **next war** they are **called upon to fight**." That same year, General Joseph Dunford, chairman of the Joint Chiefs of Staff, sounded the alarm in stark terms: "In **just a few years**, if we do not **change** the **trajectory**, we will **lose** our qualitative and quantitative **competitive advantage**."

The **greatest danger** for the United States is the **erosion of conventional deterrence**. If leaders in **Beijing** or **Moscow** think that they might **win a war** against the United States, they will run **greater risks** and **press their advantage**. They will take actions that steadily undermine the United States' commitments to its allies by casting doubt on whether Washington would really send its military to defend the Baltics, the Philippines, Taiwan, or even Japan or South Korea. They will try to **get their way** through **any means necessary**, from coercive diplomacy and economic extortion to meddling in the domestic affairs of other countries. And they will steadily harden their **spheres of influence**, turning them into areas ever more **hospitable** to **authoritarian ideology**, **surveillance states**, and **crony capitalism**. In other words, they will try, as the military strategist Sun-tzu recommended, to "win without fighting."

#### SCENARIO TWO IS CYBER:

#### Platform misuse enables a host of bad practices—undermines cyber security

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(Maurice, “Here Are All the Reasons It’s a Bad Idea to Let a Few Tech Companies Monopolize Our Data,” <https://hbr.org/2018/03/here-are-all-the-reasons-its-a-bad-idea-to-let-a-few-tech-companies-monopolize-our-data>)

So, the divergence in antitrust enforcement may reflect differences over these data-opolies’ perceived harms. Ordinarily the harm from monopolies are higher prices, less output, or reduced quality. It superficially appears that data-opolies pose little, if any risk, of these harms. Unlike some pharmaceuticals, data-opolies do not charge consumers exorbitant prices. Most of Google’s and Facebook’s consumer products are ostensibly “free.” The data-opolies’ scale can also mean higher quality products. The more people use a particular search engine, the more the search engine’s algorithm can learn users’ preferences, the more relevant the search results will likely be, which in turn will likely attract others to the search engine, and the positive feedback continues.

As Robert Bork argued, there “is no coherent case for monopolization because a search engine, like Google, is free to consumers and they can switch to an alternative search engine with a click.”

How Data-opolies Harm

But higher prices are not the only way for powerful companies to harm their consumers or the rest of society. Upon closer examination, data-opolies can pose at least eight potential harms.

Lower-quality products with less privacy. Companies, antitrust authorities increasingly recognize, can compete on privacy and protecting data. But without competition, data-opolies face less pressure. They can depress privacy protection below competitive levels and collect personal data above competitive levels. The collection of too much personal data can be the equivalent of charging an excessive price.

Data-opolies can also fail to disclose what data they collect and how they will use the data. They face little competitive pressure to change their opaque privacy policies. Even if a data-opoly improves its privacy statement, so what? The current notice-and-consent regime is meaningless when there are no viable competitive alternatives and the bargaining power is so unequal.

Surveillance and security risks. In a monopolized market, personal data is concentrated in a few firms. Consumers have limited outside options that offer better privacy protection. This raises additional risks, including:

Government capture. The fewer the number of firms controlling the personal data, the greater the potential risk that a government will “capture” the firm. Companies need things from government; governments often want access to data. When there are only a few firms, this can increase the likelihood of companies secretly cooperating with the government to provide access to data. China, for example, relies on its data-opolies to better monitor its population.

Covert surveillance. Even if the government cannot capture a data-opoly, its rich data-trove increases a government’s incentive to circumvent the data-opoly’s privacy protections to tap into the personal data. Even if the government can’t strike a deal to access the data directly, it may be able to do so covertly.

Implications of a data policy violation/security breach. Data-opolies have greater incentives to prevent a breach than do typical firms. But with more personal data concentrated in fewer companies, hackers, marketers, political consultants, among others, have even greater incentives to find ways to circumvent or breach the dominant firm’s security measures. The concentration of data means that if one of them is breached, the harm done could be orders of magnitude greater than with a normal company. While consumers may be outraged, a dominant firm has less reason to worry of consumers’ switching to rivals.

#### Platform monopoly ensures any breach cascades, collapses society

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1. Risk of data breaches. A security breach of any of the digital monopolies could result in Exabytes of users’ most vulnerable information being publicly exposed (7). Besides the risk of irreparable damage to people’s reputation, private lives, and identity (as in, e.g., the “Ashley Madison” case (8)), such a breach could result in unprecedented damage to our economy (as in, e.g., the “Sony Pictures” case (9)) and our political standing (as in, e.g., “Wikileaks Cablegate” (10)). Importantly, a security collapse of that nature might only be the start of a series of follow-up breaches. A hack of Google’s Gmail, for example, could allow the perpetrators to obtain a user’s bank account password through the “forgot password” functionality, and ultimately lead to a collapse of businesses and industries (e.g. banking, taxation, weapon silos, etc.). Compared to what was deemed a “too big to fail” state when a handful of banks collapsed in 2008, such a crisis could be unparalleled. Although the digital monopolies employ talented security teams to prevent such hacks, the public has no guarantee that a skillfully deployed attack (e.g., by another nation-state, powerful underground organization, or simply a disgruntled employee) would not be successful. Even with the best efforts of the digital monopolies—which often heavily depend on the priorities of high-ranking leaders in the organization—societies should hence operate under the assumption that the data held by the digital monopolies could be leaked at any point in time.

#### Goes nuclear.

Sagan and Weiner ’21 – Stanford Professors [Scott D.; Caroline S.G. Monroe professor of political science and senior fellow at the Center for International Security and the Freeman Spogli Institute at Stanford University; Allen S.; senior lecturer in law and director of the program in international and comparative law at Stanford Law School; 7-9-2021; "The U.S. says it can answer cyberattacks with nuclear weapons. That’s lunacy."; The Washington Post; https://www.washingtonpost.com/outlook/2021/07/09/cyberattack-ransomware-nuclear-war/; accessed 8-15-2021]

Over the July 4 weekend, the Russian-based cybercriminal organization REvil claimed credit for hacking into as many as 1,500 companies in what has been called the largest ransomware attack to date. In May, another cybercriminal group, DarkSide, also apparently located mainly in Russia, shut down most of the operations of Colonial Pipeline, which supplies nearly half the diesel, gasoline and other fuels used on the East Coast — setting off a round of panic buying that ended only when the company handed over a ransom. These incidents were bad enough. But imagine a much worse cyberattack, one that not only disabled pipelines but turned off the power at hundreds of U.S. hospitals, wreaked havoc on air-traffic-control systems and shut down the electrical grid in major cities in the dead of winter. The grisly cost might be counted not just in lost dollars but in the deaths of many thousands of people.

Under current U.S. nuclear doctrine, developed during the Trump administration, the president would be given the military option to launch nuclear weapons at Russia, China or North Korea if that country was determined to be behind such an attack.

That’s because in 2018, the Trump administration expanded the role of nuclear weapons by declaring for the first time that the United States would consider nuclear retaliation in the case of “significant non-nuclear strategic attacks,” including “attacks on the U.S., allied, or partner civilian population or infrastructure.” The same principle could also be used to justify a nuclear response to a devastating biological weapons strike.

But our analysis suggests that using nuclear weapons in response to biological or cyberattacks would be illegal under international law in virtually all circumstances. Threatening an illegal nuclear response weakens deterrence because the threat lacks inherent credibility. Perversely, this policy could also wind up committing a president to a nuclear attack if deterrence fails. While the American public would indeed be likely to want vengeance after a destructive enemy assault, the law of armed conflict requires that some military options be taken off the table. Nuclear retaliation for “significant non-nuclear strategic attacks” is one of them.

The Biden administration is now conducting its own review of the U.S. nuclear posture. The 2018 Trump change is an urgent candidate for reevaluation, but people have generally ignored it up to now. As officials work on this process, they have the chance to take full account of what could be called the “nuclear law revolution” — a growing recognition that international-law restrictions on warfare, and especially those that protect civilians, apply even to nuclear war.

## 2AC

### Case

#### Try or die for growth – lowers poverty and fertility rates which otherwise make sustainability impossible – dedev is just Thanos trying to kill off half the universe instead of using the Infinity Gauntlet to create renewables!

Smith ’18 – assistant professor of finance at Stony Brook University

Noah. September 19. “Saving the Planet Doesn’t Mean Killing Economic Growth” <https://www.bloomberg.com/opinion/articles/2018-09-19/saving-the-planet-doesn-t-mean-killing-economic-growth>

In the 19th and 20th centuries, a few countries got fabulously rich. These included most of Europe, parts of East Asia, some small oil producing states and parts of the former British Empire. In recent decades, more of the world — large parts of China, portions of India, Southeast Asia and part of Latin America — have joined the rich world, thanks to an unprecedented explosion of global growth. But for large swathes of the world, life remains a grinding daily struggle. Women in poor countries spend hours every day carrying water. Hundreds of millions of people contract malaria every year. Almost a billion people still defecate outdoors.

The obvious solution to lifting these people out of poverty — without inflicting poverty on some of those who have already escaped it — is economic growth. But there is a small but vocal group of environmentalists telling us that growth is no longer possible — that unless growth ends, climate change and other environmental impacts will destroy civilization. Writing in Foreign Policy, anthropologist Jason Hickel declares:

Once we reach the limits of efficiency, pursuing any degree of economic growth drives resource use back up … Ultimately, bringing our civilization back within planetary boundaries is going to require that we liberate ourselves from our dependence on economic growth—starting with rich nations.

Hickel cites analyses by the United Nations Environment Program and others showing that even big improvements in resource efficiency, encouraged by very high carbon taxes, will be unable to halt overall resource use or global carbon emissions. But this evidence doesn’t support Hickel’s conclusions, which rely on several misconceptions about the nature and the importance of growth.

First, Hickel doesn’t seem to grapple with the fact that most economic growth now happens in countries that are relatively poor. The International Monetary Fund estimates that from 2010 to 2015, emerging markets and developing countries were responsible for about 70 percent of global output and consumption growth, while advanced economies were responsible for the rest. The World Bank’s forecasts for 2017-2019 are similar:

China’s contribution to global growth will be double that of the U.S., and India’s will be larger than that of the entire euro zone.

The same is true of greenhouse gas emissions. Since about 1990, emissions from the U.S. and EU have fallen, while emissions from developing countries, especially China and India, have exploded:

In 2017, the International Energy Agency estimated that the growth in energy-related carbon emissions in China and the rest of developing Asia was more than five times the growth in the European Union, while U.S. emissions declined.

In other words, if Hickel and others stop economic growth, it won’t be rich countries that bear the brunt of the change. It will be poor and middle-income countries like India and China. African countries that are still desperately poor will not even get their chance.

Hickel tries to avoid this outcome by declaring that “We can improve people’s lives right now simply by sharing what we already have more fairly,” but even total global redistribution — which is, of course, far outside of the realm of political and logistical possibility — would afford the average person a standard of living only slightly better than that now enjoyed in China. A realistic amount of redistribution would do far less for the global poor — meaning they’d be the ones on the hook in a zero-growth world.

The second thing that Hickel leaves out is the connection between growth and fertility. Once countries pass per-capita gross domestic product of $10,000, fertility rates rapidly drop to or below the replacement rate of 2.1 children per woman. Halting growth now would leave most African countries trapped well below that magic level, meaning their population growth — and thus, the world’s population growth — would continue without limit. That in turn would eventually overwhelm the world’s resources — if not in terms of the climate, then certainly in terms of fresh water and food.

Fortunately, Hickel and the zero-growth environmentalists ignore a third crucial factor — technology. In rich countries, growth has shifted somewhat from physical things to digital services, which require much less energy consumption. Even more importantly, green energy, especially solar power, has progressed by leaps and bounds:

In many regions, wind and solar are already cheaper than coal power, and electric vehicles are rapidly becoming more common. This incredible technological progress means that rich countries could see a renewable-powered electrical grid and fully electrified transportation before the century is out. More importantly, cheap renewable energy means that poor countries in Africa and South Asia will be able to follow a different, cleaner path to industrialization without sacrificing living standards. Ultimately, technological progress will be much more important for limiting global resource use than the energy-efficiency measures Hickel considers.

In the movie “Avengers: Infinity War,” the supervillain Thanos kills off half the universe in a misguided attempt to prevent resource overuse. The zero-growth environmentalists are embracing a solution only slightly less destructive. Thanos’s better course would have been to use his vast powers to provide the universe with renewable energy technology that would let them get rich — and lower their fertility rates — without destroying the environment. Environmentalists in the real world should take that approach as well.

#### Growth solves environmental damage --- proves the system is sustainable which takes out their impact calc --- structural changes, clean tech, and public pressure.

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Some seminal papers reveal that, within the process of economic growth, environmental pollution level first scales up and later scales down. This is an inverted U-shaped relationship between GDP per capita and pollution level (Grossman and Krueger [3,4], Panayotou [5], Shafik [6], Selden and Song [7]). Since this relationship resembles the relationship between GDP per capita and income inequality produced by Kuznets [8], Panayotou [5] calls it Environmental Kuznets Curve (EKC).

According to the EKC hypothesis, the level of environmental pollution initially intensifies because of economic growth, later tampers after GDP per capita reaches a threshold value (Panayotou [5], Suri and Chapman [9]; Stern [10]). Therefore, this hypothesis implies a dynamic process in which structural change occurs together with economic growth (Dinda [2]). Grossman and Krueger [3] first clarify how the EKC arises. They explore that economic growth affects environmental quality through three channels: (i) scale effect, (ii) structural effect, and (iii) technological effect. Fig. 1 presents the EKC within the periods of (i), (ii) and (iii).

According to the scale effect, given the level of technology, more resources and inputs are employed to produce more commodities at the beginning of economic growth path. Hence, more energy resources and production will induce more waste and pollutant emissions, and the level of environmental quality will get worse (Torras and Boyce [11], Dinda [2], Prieur [12]). The structural effect states that the economy will have a structural transformation, and economic growth will affect environment positively along with continuation of growth. In other words, as national production grows the structure of economy changes, and the share of less polluting economic activities increases gradually. Besides, an economy experiences a transition from capital-intensive industrial sectors to service sector and reaches technology-intensive knowledge economy (the final stage of the structural change). Due to the fact that technology-intensive sectors utilize fewer natural sources, the impact of these sectors on environmental pollution will be less. The last channel of the growth process is the technological effect channel. Since a high-income economy can allocate more resources for research and development expenditures, the new technological processes will emerge. Thus, the country will replace old and dirty technologies with new and clean technologies, and environmental quality will deepen (Borghesi [13], Copelan and Taylor [14]). Consequently, environmental pollution initially increases and later decreases as a result of scale, structural and technological effect emerging along with growth path.

Some studies of EKC hypothesis consider income elasticity of clean environment demand (Beckerman [15], Selden and Song [16], McConnel [17], Panayotou [18], Carson et al. [19], Brock and Taylor [20]). Accordingly, the share of low-income people’s expenditures for food and basic necessities is higher than that of high-income societies’ expenditures for the same type of commodities (Engel’s Law). As income level and life standards rise in conjunction with economic growth, the societies’ demand for clean environment advances. Besides, societies make often pressure on policy makers to protect the environment through new regulations. One might argue that, because of these reasons, clean environment is a luxury commodity and the demand elasticity of clean environment is higher than unity (Dinda [2]).

#### No impact – warming doesn’t cause extinction and various factors check.

Farquhar et al. 17 (Sebastian Farquhar; John Halstead; Owen Cotton-Barratt; Stefan Schubert; Haydn Belfield; Andrew Snyder-Beattie, Doctoral Student @ Oxford University; climate activist; Research Scholars Programme Director @ Oxford University; Post-doc @ Oxford University’s Department of Experimental Psychology; Academic Project Manager @ the Centre for the Study of Existential Risk; Director of Research @ Oxford University’s Future of Humanity Institute, "Existential Risk Diplomacy and Governance," GLOBAL PRIORITIES PROJECT 2017, 2017, https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf, Date Accessed: 7-10-2019, SB).

1.1.2 Extreme climate change and geoengineering The most likely levels of global warming are very unlikely to cause human extinction.15 The existential risks of climate change instead stem from tail risk climate change – the low probability of extreme levels of warming – and interaction with other sources of risk. It is impossible to say with confidence at what point global warming would become severe enough to pose an existential threat. Research has suggested that warming of 11-12°C would render most of the planet uninhabitable,16 and would completely devastate agriculture.17 This would pose an extreme threat to human civilisation as we know it.18 Warming of around 7°C or more could potentially produce conflict and instability on such a scale that the indirect effects could be an existential risk, although it is extremely uncertain how likely such scenarios are.19 Moreover, the timescales over which such changes might happen could mean that humanity is able to adapt enough to avoid extinction in even very extreme scenarios. The probability of these levels of warming depends on eventual greenhouse gas concentrations. According to some experts, unless strong action is taken soon by major emitters, it is likely that we will pursue a medium-high emissions pathway.20 If we do, the chance of extreme warming is highly uncertain but appears non-negligible. Current concentrations of greenhouse gases are higher than they have been for hundreds of thousands of years,21 which means that there are significant unknown unknowns about how the climate system will respond. Particularly concerning is the risk of positive feedback loops, such as the release of vast amounts of methane from melting of the arctic permafrost, which would cause rapid and disastrous warming.22 The economists Gernot Wagner and Martin Weitzman have used IPCC figures (which do not include modelling of feedback loops such as those from melting permafrost) to estimate that if we continue to pursue a medium-high emissions pathway, the probability of eventual warming of 6°C is around 10%,23 and of 10°C is around 3%.24 These estimates are of course highly uncertain. It is likely that the world will take action against climate change once it begins to impose large costs on human society, long before there is warming of 10°C. Unfortunately, there is significant inertia in the climate system: there is a 25 to 50 year lag between CO2 emissions and eventual warming,25 and it is expected that 40% of the peak concentration of CO2 will remain in the atmosphere 1,000 years after the peak is reached.26 Consequently, it is impossible to reduce temperatures quickly by reducing CO2 emissions. If the world does start to face costly warming, the international community will therefore face strong incentives to find other ways to reduce global temperatures. The only known way to reduce global temperatures quickly and cheaply is a form of climate engineering called Solar Radiation Management (SRM), which involves cooling the Earth by reflecting sunlight back into space.27 The most researched form of SRM involves injecting aerosols into the stratosphere.28 Most of the evidence so far suggests that ideal SRM deployment programmes would reduce overall damages relative to an un-engineered greenhouse world.29

**1. alters incentives—prefer robust statistical analysis**

**Reghr 13**

Ernie Reghr, Senior Fellow in Arctic Security at The Simons Foundation, 2-4-13, “Intrastate Conflict: Data, Trends and Drivers” <http://www.isn.ethz.ch/Digital-Library/Articles/Special-Feature/Detail/?lng=en&id=158597&tabid=1453496807&contextid774=158597&contextid775=158627>

“The **most robustly significant predictor** of [armed] conflict risk and its duration is some indicator of economic prosperity. At a higher income people have more to lose from the destructiveness of conflict; and higher per-capita income implies a better functioning social contract, institutions and state capacity.”[3] This correlation between underdevelopment and armed conflict is confirmed in a 2008 paper by Thania Paffenholz[4] which notes that “since 1990, more than 50% of all conflict-prone countries have been low income states…. Two thirds of all armed conflicts take place in African countries with the highest poverty rates. Econometric research found a correlation between the poverty rate and likelihood of armed violence….[T]he lower the GDP per capita in a country, the higher the likelihood of armed conflict.” Of course, it is important to point out that this is not a claim that there is a direct causal connection between poverty and armed conflict. To repeat, the causes of conflict are complex and context specific, nevertheless, says Paffenholz, there is a clear correlation between a low and declining per capita income and a country’s vulnerability to conflict. It is also true, on the other hand, that there are low income countries that experience precipitous economic decline, like Zambia in the 1980s and 1990s, without suffering the kind of turmoil that has visited economically more successful countries like Kenya and Cote d’Ivoire. Referring to both Zambia and Nigeria, Pafenholz says these are cases in which “the social compact” has proven to be resilient. Both have formal and informal mechanisms that are able to address grievances in ways that allowed them to be aired and resolved or managed without recourse to violence. A brief review of literature on economics and armed conflict, published in the Journal of the Royal Society of Medicine, indicates the complexity and imprecision behind the question, “does poverty cause conflict?” While many of the “world’s poorest countries are riven by armed conflict,” and while poverty, conflict and under-development set up a cycle of dysfunction in which each element of the cycle is exacerbated by the other, it is also the case that “conflict obviously does not just afflict the poorest countries” – as Northern Ireland and the former Yugoslavia demonstrate. “Many poor countries are not at war; shared poverty may not be a destabilizing influence. Indeed, economic growth can destabilize, as the wars in countries afflicted by an abundance of particular natural resources appear to show.”[5] Another review of the literature makes the general point that “the escalation of conflict during economic downturns is more likely in countries recovering from conflict, or fragile states.” That makes Africa especially vulnerable on two counts: economic deprivation and recent armed conflict are present in a relatively high number of states, making the continent especially vulnerable to economic shocks. As a general rule, “weak economies often translate into weak and fragile states and the presence of violent conflict, which in turn prevents economic growth.” One study argues that “the risk of war in any given country is determined by the initial level of income, the rate of economic growth and the level of dependency on primary commodity exports.” Changes in rates of economic growth thus lead to changes in threats of conflict. As unemployment rises in fragile states this can “exacerbate conflict due to comparatively better income opportunities for young men in rebel groups as opposed to labour markets.”[6] The concentration of armed conflict in lower income countries is also reflected in the conflict tabulation by Project Ploughshares over the past quarter century. The 2009 Human Development Index ranks 182 countries in four categories of Human Development – Very High, High, Medium, Low. Of the 98 countries in the Medium and Low categories of human development in 2009, 55 per cent experienced war on their territories in the previous 24 years. In the same period, only 24 per cent of countries in the High human development category saw war within their borders, while just two (5 per cent) countries in the Very High human development ranking had war on their territory (the UK re Northern Ireland and Israel). The wars of the recent past were overwhelmingly fought on the territories of states at the low end of the human development scale. A country’s income level is thus a strong indicator of its risk of being involved in sustained armed conflict. Low income countries lack the capacity to create conditions conducive to serving the social, political, and economic welfare of their people. And when economic inequality is linked to differences between identity groups, the correlation to armed conflict is even stronger. In other words, group based inequalities are especially destabilizing.[7] These failures in human security are of course heavily shaped by external factors, notably international economic and security conditions and the **interests of the major powers** (in short, globalization),[8] and these factors frequently combine with internal political/religious/ethnic circumstances that create conditions especially conducive to conflict and armed conflict.

**2. perception of declining trade ties wrecks interdependence—goes nuclear**

**Tønnesson 15**

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In bipolar systems a state believing itself to be in decline is much more likely than a rising power to initiate conflict: ‘rising states should want to avoid war while they are still rising, since by waiting they can fight later with more power’ (Copeland, 2000: 2–3, 14, 20). Hence China and the US have a mutual interest in preventing each other from fearing decline. **Strong military powers who** believe themselves to be in decline (**have negative trade expectations**) **are particularly dangerous** (Copeland, 2000: 5, 13, 22, 237, 241, 244; Copeland, 2015: 429). Thus Beijing must be weary of tying itself up too closely with a declining Russia and even more weary of American fears of decline.

**Dynamic relational factors such as** ‘potential power’ or **‘trade expectations’ are more important in determining choice between war and peace than static factors**, such as the actual level of trade, or a state’s form of governance on the ‘unit level’ (Copeland, 2000: 235–236, 238, 245; Copeland, 2015: 12, 14, 27–50, 435–436). To the extent that unit level differences count, the character of the target state is more important than that of the aggressor; while the liberal assumption that some kinds of regimes are more likely to initiate war than others is wrong, it is true that some kinds of regimes are more likely to be targetted than others.2 To avoid becoming a target it may help to be seen as predictable, transparent, respectful of international law, and open to trade and investments.

In the conclusion to his **exhaustive examination** of how trade expectations have influenced various decisions for war in the period 1790–1991, **Copeland is optimistic about today’s prospects: ‘there are strong reasons to believe** that **China will stay peacefully engaged in the system over the long term**, at least **as long as the U**nited **S**tates proves willing to **maintain an open and free-flowing global economic system’**;

‘the reasons for optimistic economic expectations in both China and the **U**nited **S**tates should outweigh the reasons for pessimism for at least a couple more decades’ (Copeland, 2015: 432, 444). Chan’s and Copeland’s **optimism depends on the continued success of globalization. If trade expectations falter on any or both sides of the Pacific the unit-level economy-first policies may lose their pacifying effect.** Chan confirms that the dampening effect of economic inter-dependence on conflict behaviour **depends on** **policies of economic openness and integration.** Hence there is need to understand global financial politics, global trends and economic expectations in Beijing, Washington, Tokyo and other East Asian capitals before assessing the likelihood that **economic interdependence will continue to ensure peace among major nuclear powers.**

#### Degrowth transition is impossible – lack of support, consumption habits, and elite power domination

Burch-Hansen 18

(Hubert Buch-Hansen, Department of Business and Politics, Copenhagen Business School, “The Prerequisites for a Degrowth Paradigm Shift: Insights from Critical Political Economy,” Ecological Economics, Volume 146, April 2018, pp. 157-163)

Political projects do not become hegemonic just because they embody good ideas. For a project to become hegemonic, (organic) intellectuals first need to develop the project and a constellation of social forces with sufficient power and resources to implement it then needs to find it appealing and struggle for it. In this context, it is worth noting that degrowth, as a social movement, has been gaining momentum for some time, not least in Southern Europe. Countless grassroots' initiatives (e.g., D'Alisa et al., 2013) are the most visible manifestations that degrowth is on the rise. Intellectuals – including founders of ecological economics such as Nicholas Georgescu-Roegen and Herman Daly, and more recently degrowth scholars such as Serge Latouche and Giorgos Kallis – have played a major role in developing and disseminating the ideas underpinning the project. A growing interest in degrowth in academia, as well as well-attended biennial international degrowth conferences, also indicate that an increasing number of people embrace such ideas.

Still, the degrowth project is nowhere near enjoying the degree and type of support it needs if its policies are to be implemented through democratic processes. The number of political parties, labour unions, business associations and international organisations that have so far embraced degrowth is modest to say the least. Economic and political elites, including social democratic parties and most of the trade union movement, are united in the belief that economic growth is necessary and desirable. This consensus finds support in the prevailing type of economic theory and underpins the main contenders in the neoliberal project, such as centre-left and nationalist projects. In spite of the world's multidimensional crisis, a pro-growth discourse in other words continues to be hegemonic: it is widely considered a matter of common sense that continued economic growth is required.

It is also noteworthy that economic and political elites, to a large extent, continue to support the neoliberal project, even in the face of its evident shortcomings. Indeed, the 2008 financial crisis did not result in the weakening of transnational financial capital that could have paved the way for a paradigm shift. Instead of coming to an end, neoliberal capitalism has arguably entered a more authoritarian phase (Bruff, 2014). The main reason the power of the pre-crisis coalition remains intact is that governments stepped in and saved the dominant fraction by means of massive bailouts. It is a foregone conclusion that this fraction and the wider coalition behind the neoliberal paradigm (transnational industrial capital, the middle classes and segments of organized labour) will consider the degrowth paradigm unattractive and that such social forces will vehemently oppose the implementation of degrowth policies (see also Rees, 2014: 97).

While degrowth advocates envision a future in which market forces play a less prominent role than they do today, degrowth is not an anti-market project. As such, it can attract support from certain types of market actors. In particular, it is worth noting that social enterprises, such as cooperatives (Restakis, 2010), play a major role in the degrowth vision. Such enterprises are defined by being ‘organisations involved at least to some extent in the market, with a clear social, cultural and/or environmental purpose, rooted in and serving primarily the local community and ideally having a local and/or democratic ownership structure’ (Johanisova et al., 2013: 11). Social enterprises currently exist at the margins of a system, in which the dominant type of business entity is profit-oriented, shareholder-owned corporations. The further dissemination of social enterprises, which is crucial to the transitions to degrowth societies, is – in many cases – blocked or delayed as a result of the centrifugal forces of global competition (Wigger and Buch-Hansen, 2013). Overall, social enterprises thus (still) constitute a social force with modest power.

Ougaard (2016: 467) notes that one of the major dividing lines in the contemporary transnational capitalist class is between capitalists who have a material interest in the carbon-based economy and capitalists who have a material interest in decarbonisation. The latter group, for instance, includes manufacturers of equipment for the production of renewable energy (ibid.: 467). As mentioned above, degrowth advocates have singled out renewable energy as one of the sectors that needs to grow in the future. As such, it seems likely that the owners of national and transnational companies operating in this sector would be more positively inclined towards the degrowth project than would capitalists with a stake in the carbon-based economy. Still, the prospect of the “green sector” emerging as a driving force behind degrowth currently appears meagre. Being under the control of transnational capital (Harris, 2010), such companies generally embrace the “green growth” discourse, which ‘is deeply embedded in neoliberal capitalism’ and indeed serves to adjust this form of capitalism ‘to crises arising from contradictions within itself’ (Wanner, 2015: 23).

In addition to support from the social forces engendered by the production process, a political project ‘also needs the political ability to mobilize majorities in parliamentary democracies, and a sufficient measure of at least passive consent’ (van Apeldoorn and Overbeek, 2012: 5–6) if it is to become hegemonic. As mentioned, degrowth enjoys little support in parliaments, and certainly the pro-growth discourse is hegemonic among parties in government.5 With capital accumulation being the most important driving force in capitalist societies, political decision-makers are generally eager to create conditions conducive to production and the accumulation of capital (Lindblom, 1977: 172). Capitalist states and international organisations are thus “programmed” to facilitate capital accumulation, and do as such constitute a strategically selective terrain that works to the disadvantage of the degrowth project.

The main advocates of the degrowth project are grassroots, small fractions of left-wing parties and labour unions as well as academics and other citizens who are concerned about social injustice and the environmentally unsustainable nature of societies in the rich parts of the world. The project is thus ideationally driven in the sense that support for it is not so much rooted in the material circumstances or short-term self-interests of specific groups or classes as it is rooted in the conviction that degrowth is necessary if current and future generations across the globe are to be able to lead a good life. While there is no shortage of enthusiasts and creative ideas in the degrowth movement, it has only modest resources compared to other political projects. To put it bluntly, the advocates of degrowth do not possess instruments that enable them to force political decision-makers to listen to – let alone comply with – their views. As such, they are in a weaker position than the labour union movement was in its heyday, and they are in a far weaker position than the owners and managers of large corporations are today (on the structural power of transnational corporations, see Gill and Law, 1989).

6. Consent It is also safe to say that degrowth enjoys no “passive consent” from the majority of the population. For the time being, degrowth remains unknown to most people. Yet, if it were to become generally known, most people would probably not find the vision of a smaller economic system appealing. This is not just a matter of degrowth being ‘a missile word that backfires’ because it triggers negative feelings in people when they first hear it (Drews and Antal, 2016). It is also a matter of the actual content of the degrowth project.

Two issues in particular should be mentioned in this context. First, for many, the anti-capitalist sentiments embodied in the degrowth project will inevitably be a difficult pill to swallow. Today, the vast majority of people find it almost impossible to conceive of a world without capitalism. There is a ‘widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible to even imagine a coherent alternative to it’ (Fisher, 2009: 2). As Jameson (2003) famously observed, it is, in a sense, easier to imagine the end of the world than it is to imagine the end of capitalism. However, not only is degrowth – like other anti-capitalist projects – up against the challenge that most people consider capitalism the o

nly system that can function; it is also up against the additional challenge that it speaks against economic growth in a world where the desirability of growth is considered common sense.

Second, degrowth is incompatible with the lifestyles to which many of us who live in rich countries have become accustomed. Economic growth in the Western world is, to no small extent, premised on the existence of consumer societies and an associated consumer culture most of us find it difficult to completely escape. In this culture, social status, happiness, well-being and identity are linked to consumption (Jackson, 2009). Indeed, it is widely considered a natural right to lead an environmentally unsustainable lifestyle – a lifestyle that includes car ownership, air travel, spacious accommodations, fashionable clothing, an omnivorous diet and all sorts of electronic gadgets. This Western norm of consumption has increasingly been exported to other parts of the world, the result being that never before have so many people taken part in consumption patterns that used to be reserved for elites (Koch, 2012). If degrowth were to be institutionalised, many citizens in the rich countries would have to adapt to a materially lower standard of living. That is, while the basic needs of the global population can be met in a non-growing economy, not all wants and preferences can be fulfilled (Koch et al., 2017). Undoubtedly, many people in the rich countries would experience various limitations on their consumption opportunities as a violent encroachment on their personal freedom. Indeed, whereas many recognize that contemporary consumer societies are environmentally unsustainable, fewer are prepared to actually change their own lifestyles to reverse/address this.

At present, then, the degrowth project is in its “deconstructive phase”, i.e., the phase in which its advocates are able to present a powerful critique of the prevailing neoliberal project and point to alternative solutions to crisis. At this stage, not enough support has been mobilised behind the degrowth project for it to be elevated to the phases of “construction” and “consolidation”. It is conceivable that at some point, enough people will become sufficiently discontent with the existing economic system and push for something radically different. Reasons for doing so could be the failure of the system to satisfy human needs and/or its inability to resolve the multidimensional crisis confronting humanity. Yet, various material and ideational path-dependencies currently stand in the way of such a development, particularly in countries with large middle-classes. Even if it were to happen that the majority wanted a break with the current system, it is far from given that a system based on the ideas of degrowth is what they would demand.

#### Facing down apocalyptic threats is the most productive and dissuades fear – the alt leads to loathing

Lee Clarke, Ph.D., Department of Sociology @ Rutgers, ‘06

(*Worst Cases: Terror and Catastrophe in the Popular Imagination*, p. ix-xi)

People are worried, now, about terror and catastrophe in ways that a short time ago would have seemed merely fantastic. Not to say that horror and fear suffuse the culture, but they are in the ascendant. And for good reason. **There are possibilities for accident and attack, disease and disaster that would make September 11 seem like a** mosquito bite.I think we have all become more alert to some of those possibilities, and **it is wise to face them down**. The idea of worst cases isn’t foreign to us. We have not, however, been given enough useful insight or guidance, either from academics or political leaders, regarding how to do that. In this book I look the worst full in the face. What I see is frightening but enlightening. I believe that knowing a thing permits more comfort with that thing. Sometimes the comfort comes from greater control. Sometimes it comes from knowing the enemy, or the scary thing, which proffers a way forward, toward greater safety. **There is horror in disaster. But there is much more, for we can use calamity to glean wisdom, to find hope**. Tragedy is with us now as never before. But that **does not mean we need be consumed with fear and loathing**. We can learn a lot about how society works, and fails to work, by looking at the worst. We can learn about the imagination, about politics, and about the wielding of power. We can learn about people’s capacities for despair and callousness, and for optimism and altruism. As we learn, our **possibilities for improvement increase**. Worst Cases is about the human condition in the modern world. Some say that September 11 changed everything. That’s not true. But it did imprint upon our imaginations scenes of horror that until then had been the province of novels and movies. We now imagine ourselves in those images, and our wide-awake nightmares are worse than they used to be. **We must name, analyze, and talk about the beast**. **That’s our best hope**, as a society, to come to terms with the evil, the human failings, the aspects of nature, and just plain chance that put us in harm’s way. Of course, talking about the worst can be a way to scare people into accepting programs that have other ends, and that they might not otherwise accept. The image of a nuclear mushroom cloud, for example, can be used to justify war because the possibility is so frightening that we would do almost anything to prevent it. The dark side of worst case thinking is apparent even at the level of personal relationships. Unleavened by evidence or careful thought it can lead to astonishingly poor policy and dumb decisions. **No organizational culture can prevent or guard against it.** The only response that will effectively mute such abuses is one that is organized and possessed of courage and vision. So warnings that the worst is at hand should be inspected closely, particularly if they call for actions that would serve ends the speaker cannot or does not freely acknowledge. I acknowledge my ends in this book. For better or worse, I always have. Worst Cases is a book full of stories about disasters. But it is not a disaster book. It is a book about the imagination. We look back and say that 9/11 was the worst terrorist attack ever in the United States, that the Spanish Flu of 1918, the Black Death, or AIDS was the worst epidemic ever, or that the 1906 San Francisco earthquake was the Great Earthquake. Nothing inherent to the events requires that we adorn them with superlatives. People’s imaginations make that happen. Similarly, we construct possible futures of terror and calamity: what happens if the nation’s power grid goes down for six months? what if smallpox sweeps the world? what if nuclear power has a particularly bad day? what if a monster tsunami slams southern California? These too are feats of imagination. There are those who say we shouldn’t worry about things that are unlikely to happen. That’s what your pilot means in saying, after a turbulent cross-country flight, “You’ve just completed the safest part of your trip.” We hear the same thing when officials tell us that the probability of a nuclear power plant melting down is vanishingly small. Or that the likelihood of an asteroid striking the earth is one in a million, billion, or trillion. There is similar advice from academics who complain that people are unreasonable because their fears don’t jibe with statistics. **Chance, they reckon, is in our favor. But chance is often against us**. My view is that **disasters and failures are normal,** that, as a colleague of mine puts it, **things that have never happened before happen all the time.** A fair number of those things end up being events we call worst cases. When they happen we’re given opportunities to learn things about society and human nature that are usually obscured. **Worst case thinking hasn’t been given its due**, either in academic writings or in social policy. We’re not paying enough attention to the ways we organize society that make us vulnerable to worst cases. We’re not demanding enough responsibility and transparency from leaders and policy makers. I am not an alarmist, but I am alarmed. That’s why I wrote Worst Cases. It is also why my tone and language are not technical. I am a sociologist, but I wrote Worst Cases so that nonsociologists can read it.

#### Simulating them is good.

Lee Clarke, Ph.D., Department of Sociology @ Rutgers, ‘05

(“Trying to see the future,” November 8, http://www.theguardian.com/science/2005/nov/09/spaceexploration.g2)

**Virtual worst cases teach less about what might happen than about how we learn**. **The process itself is the lesson learned,** not the degree to which such exercises reveal our level of preparedness. It's probably safe to assume that, for those who took part in Dark Winter, worst-case thinking is more a part of their cognitive makeup than before. The greatest utility of practising disaster response may not be the anticipatory planning but in **developing the** intellectual resilience **and** informal networks **to cope with real worst cases.**

Used correctly, worst cases (even virtual ones) **can lead to "imagination stretch".** They can provide incentives and situations that propel innovation. The airline industry provides a good example. Research shows that after reported near-misses, other pilots increase their own reporting of them. They can report anonymously, without fear that their testimony will be used against them. The Federal Aviation Administration uses the reports as descriptions of possible accident scenarios not previously considered.

Instead of thinking of worst cases as statistically rare, and therefore outside the realm of responsible planning, we should think of them as **part of the usual ebb and flow of everyday life**. We need to demystify the illusions of control that are proffered to us by our leaders and expected by the public. And we need to break organisational strangleholds on the idea of disasterresponse. On 9/11, an estimated half-million people fled Manhattan in one of the largest waterborne evacuations in history. How did that happen? Barges, fishing boats, pleasure boats, ferries - all manner of watercraft carried people to safety. It wasn't driven by an official plan. No one was in charge. Ordinary people, though terrified, boarded the vessels in an orderly way. As a rescue system, it was flexible, decentralised, and massively effective. As Sam Nunn observed at the end of the Dark Winter experiment: "The federal government has to have the cooperation of the American people. There is no federal force out there that can require 300,000,000 people to take steps they don't want to take."

**"Catastrophes are great educators of mankind**," said the Harvard sociologist Pitirim Sorokin. **Worst cases will always be with us, or just around the corner. We don't even like to think about it, but the truth is that disasters drive new ideas.**

### Cap K

#### Extinction outweighs---it’s a categorically distinct phenomenon that outweighs other considerations.

Burke et al., Associate Professor of International and Political Studies @ UNSW, Australia, ‘16

(Anthony, Stefanie Fishel is Assistant Professor, Department of Gender and Race Studies at the University of Alabama, Audra Mitchell is CIGI Chair in Global Governance and Ethics at the Balsillie School of International Affairs, Simon Dalby is CIGI Chair in the Political Economy of Climate Change at the Balsillie School of International Affairs, and, Daniel J. Levine is Assistant Professor of Political Science at the University of Alabama, “Planet Politics: Manifesto from the End of IR,” Millennium: Journal of International Studies 1–25)

8. Global ethics must respond to mass extinction. In late 2014, the Worldwide Fund for Nature reported a startling statistic: according to their global study, 52% of species had gone extinct between 1970 and 2010.60 This is not news: for three decades, conservation biologists have been warning of a ‘sixth mass extinction’, which, by definition, could eliminate more than three quarters of currently existing life forms in just a few centuries.61 In other words, it could threaten the practical possibility of the survival of earthly life. Mass extinction is not simply extinction (or death) writ large: it is a qualitatively different phenomena that demands its own ethical categories. It cannot be grasped by aggregating species extinctions, let alone the deaths of individual organisms. Not only does it erase diverse, irreplaceable life forms, their unique histories and open-ended possibilities, but it threatens the ontological conditions of Earthly life.

IR is one of few disciplines that is explicitly devoted to the pursuit of survival, yet it has almost nothing to say in the face of a possible mass extinction event.62 It utterly lacks the conceptual and ethical frameworks necessary to foster diverse, meaningful responses to this phenomenon. As mentioned above, Cold-War era concepts such as ‘nuclear winter’ and ‘omnicide’ gesture towards harms massive in their scale and moral horror. However, they are asymptotic: they imagine nightmares of a severely denuded planet, yet they do not contemplate the comprehensive negation that a mass extinction event entails. In contemporary IR discourses, where it appears at all, extinction is treated as a problem of scientific management and biopolitical control aimed at securing existing human lifestyles.63 Once again, this approach fails to recognise the reality of extinction, which is a matter of being and nonbeing, not one of life and death processes.

Confronting the enormity of a possible mass extinction event requires a total overhaul of human perceptions of what is at stake in the disruption of the conditions of Earthly life. The question of what is ‘lost’ in extinction has, since the inception of the concept of ‘conservation’, been addressed in terms of financial cost and economic liabilities.64 Beyond reducing life to forms to capital, currencies and financial instruments, the dominant neoliberal political economy of conservation imposes a homogenising, Western secular worldview on a planetary phenomenon. Yet the enormity, complexity, and scale of mass extinction is so huge that humans need to draw on every possible resource in order to find ways of responding. This means that they need to mobilise multiple worldviews and lifeways – including those emerging from indigenous and marginalised cosmologies. Above all, it is crucial and urgent to realise that extinction is a matter of global ethics. It is not simply an issue of management or security, or even of particular visions of the good life. Instead, it is about staking a claim as to the goodness of life itself. If it does not fit within the existing parameters of global ethics, then it is these boundaries that need to change.

9. An Earth-worldly politics. Humans are worldly – that is, we are fundamentally worldforming and embedded in multiple worlds that traverse the Earth. However, the Earth is not ‘our’ world, as the grand theories of IR, and some accounts of the Anthropocene have it – an object and possession to be appropriated, circumnavigated, instrumentalised and englobed.65 Rather, it is a complex of worlds that we share, co-constitute, create, destroy and inhabit with countless other life forms and beings.

The formation of the Anthropocene reflects a particular type of worlding, one in which the Earth is treated as raw material for the creation of a world tailored to human needs. Heidegger famously framed ‘earth’ and ‘world’ as two countervailing, conflicting forces that constrain and shape one another. We contend that existing political, economic and social conditions have pushed human worlding so far to one extreme that it has become almost entirely detached from the conditions of the Earth. Planet Politics calls, instead, for a mode of worlding that is responsive to, and grounded in, the Earth. One of these ways of being Earth-worldly is to embrace the condition of being entangled. We can interpret this term in the way that Heidegger66 did, as the condition of being mired in everyday human concerns, worries, and anxiety, to prolong existence. But, in contrast, we can and should reframe it as authors like Karen Barad67 and Donna Haraway68 have done. To them and many others, ‘entanglement’ is a radical, indeed fundamental condition of being-with, or, as Jean-Luc Nancy puts it, ‘being singular plural’.69 This means that no being is truly autonomous or separate, whether at the scale of international politics or of quantum physics. World itself is singular plural: what humans tend to refer to as ‘the’ world is actually a multiplicity of worlds at various scales that intersect, overlap, conflict, emerge as they surge across the Earth. World emerges from the poetics of existence, the collision of energy and matter, the tumult of agencies, the fusion and diffusion of bonds.

Worlds erupt from, and consist in, the intersection of diverse forms of being – material and intangible, organic and inorganic, ‘living’ and ‘nonliving’. Because of the tumultuousness of the Earth with which they are entangled, ‘worlds’ are not static, rigid or permanent. They are permeable and fluid. They can be created, modified – and, of course, destroyed. Concepts of violence, harm and (in)security that focus only on humans ignore at their peril the destruction and severance of worlds,70 which undermines the conditions of plurality that enables life on Earth to thrive.

#### Our tailored defense of competition policy is compatible with broader anti-neoliberalism—their k conflates sources of structural equality and devolves into totalitarianism

Coniglio, antitrust attorney in the Washington, DC office of Sidley Austin LLP, ‘20

(Joseph V., “Economizing the Totalitarian Temptation: A Risk-Averse Liberal

Realism for Political Economy and Competition Policy in a Post-Neoliberal Society,” 59

Santa Clara L. Rev. 703)

The implication of the foregoing is that the most pressing task for competition policymakers may not involve a rethinking of first principles. The principles of neoliberal competition policy may have ultimately been proven justified by an unprecedented period of economic growth, technological progress and reductions in poverty, and should presumably remain operative as long as they remain the best framework for bringing about these ends. Neither, as we have suggested, must the capitalist entrepreneur be lost in the process. The totalitarian temptation to submit to general state control of the economy-whether it be in the form of communism from below or fascism from above should be resisted so as to preserve and build upon the great prosperity Western Civilization has managed to achieve.

This statement will no doubt be highly unsatisfactory to many critics of neoliberalism who seek more fundamental and revolutionary changes. Surely, they suggest, there must be some principled basis for critiquing the neoliberal status quo with which so many are frustrated. Indeed, there very well may be, and none of the arguments in this article should be understood to the contrary. The goal of this article has been limited to a tailored defense of neoliberal principles only as they relate to competition policy, broadly understood. It does not suggest that neoliberal monetary, trade, and fiscal policies are also sound-let alone a neoliberal social order, where all the core institutions within society are organized according to the neoliberal principles of wealthmaximization, empiricism, and the rest.129 This is to say that even if neoliberalism is a sound theory as applied to the area of competition policy, neoliberal monetary policy, for example, may be problematic and a just target for contemporary critics. Similarly, claiming that competition policy should be enforced using a consumer welfare standard does not mean that all the organs of law and civil society should be oriented to maximize wealth or consumer welfare, even if this economic inquiry is nonetheless informative. 30 It is well known that several prominent neoliberals have expanded the neoliberal policy apparatus beyond the regulation of market capitalism with which antitrust is concerned to domains typically understood to be beyond a purely utilitarian purview.' 3 ' However, whatever the merits of these broader neoliberal policy programs, the competition policy baby, so to speak, should not be thrown out with the bathwater.

Consider the charge that neoliberal policies have increased wealth inequality in the United States. Some commentators attempt to link this increased inequality with a decline in competition'3 2 and, by implication, consumer welfare competition policy. Notwithstanding the interest such theories appeared to have garnered from highly distinguished economists and policymakers, such as Nobel Laureate Joe Stiglitz,133 one might alternatively consider whether increasing wealth inequality and the resultant social strife are far more a result of policies in other areas, such as monetary policy. 134 At the same time as Chicago School antitrust policy took root, the American economy began to undergo sustained expansions in the money supply and reductions in interest rates that, at least in theory, disproportionately reward the owners of financial assets, who are more likely to be wealthy. 135

Indeed, after the financial crisis, monetary policy engaged in a truly unprecedented expansion, with the Federal Reserve lowering interest rates to zero and increasing its balance sheet from approximately $900 billion before the crisis to $4.5 trillion after, most of which constituted either troublesome mortgage-backed securities or treasury bonds. 36 The share of wealth of the world's richest people roughly doubled. 37 At the same time, however, one would seem to look in vain for any shift toward an increased laissez faire competition policy during the Obama administration. Indeed, antitrust enforcement under the Obama administration arguably increased relative to the George W. Bush administration, even if only at the margins and not in the area of monopolization. 3

#### TWO --- *Amex* is the apex of the consumer welfare fallacy—rejecting it is a precondition for structural critique

Newman, Associate Professor, University of Miami School of Law, ‘21

(John, “The Output–Welfare Fallacy,” 107 Iowa L. Rev. (forthcoming))

In practice, the Output–Welfare Fallacy would yield bizarre outcomes in some cases, systematically biased outcomes in others, and is nonsensical and unworkable in still others. If the Fallacy is taken seriously, the very same conduct would often be both the supreme good and the supreme evil of antitrust—a modern antitrust paradox. Where it has been deployed, it has caused massive societal harm. That said, the Output–Welfare Fallacy fails to describe substantial portions of doctrine and practice. As the following discussion explains, it is fortunate that the Fallacy largely fails in this latter regard, given the havoc it can wreak when it is actually deployed. Moreover, this disconnect from reality will make it easier to excise outputism from the antitrust enterprise. It is to that task that we now turn.

IV. ESCAPING THE NEW ANTITRUST PARADOX

Recognizing the Output–Welfare Fallacy as such offers immense payoffs. First, harmful outputist decisions—most pressingly the Supreme Court’s 2018 *AmEx* opinion—warrant swift overruling, whether judicially or via legislation. Even if AmEx is not explicitly overruled, it should be relegated to the dustbin of history alongside other similarly low-quality opinions. Second, evolving beyond outputism allows a much-needed correction of antitrust law’s substantive burdens of proof. Analysis of market power, anticompetitive effects, and procompetitive justifications can all be improved considerably by moving beyond the narrow confines of outputism.

A. Burying AmEx: Bad Law, Worse Economics

The Output–Welfare Fallacy reached its apex in the Supreme Court’s recent AmEx opinion. As the following discussion explains, AmEx warrants immediate reversal, whether by the Court itself or via legislation.288 At the very least, it can safely be relegated to the dustbin of history, as often happens to especially shoddy antitrust opinions.289

AmEx began as a suit by the United States against the three largest credit-card companies, Visa, AmEx, and MasterCard. The Government sought to enjoin “no-steering” rules contractually imposed by these networks on all card-accepting merchants.290 The rules forbid merchants from presenting any network in a differentiated way to customers. Merchants cannot offer discounts for using a particular brand of card, tell customers “We prefer” a certain card, or inform customers of the costs associated with each brand.291 Visa and MasterCard quickly settled, but AmEx—which generally charged the highest merchant fees—fought to keep its rules in place.292

At trial, the Antitrust Division proved that AmEx’s no-steering rules had stifled competition and increased card-acceptance prices across all networks.293 When Discover tried to compete by lowering prices to merchants, for example, AmEx’s rules prevented those merchants from encouraging their customers to pay with Discover’s less-expensive cards.294 Discover predictably abandoned its efforts to compete and instead raised card-acceptance fees—which it was able to do with “impunity,” again due to AmEx’s restraints.295 Facing higher across-the-board acceptance costs, merchants pass along some of those costs to consumers in the form of higher across-the-board retail prices.

296 In other words, AmEx’s restraints increase the cost of nearly every good and service sold to consumers in the United States.297

Despite the abundant evidence of harm in the trial record, a divided Court declared that the Government had failed to carry its burden because it had not proven that AmEx’s conduct reduced output. Justice Thomas, writing for the majority, began by quoting the leading treatise for the proposition that “[m]arket power is the ability to raise price profitably by restricting output.”298 (Thomas added the emphasis.) The majority opinion begrudgingly admitted that AmEx’s restraints had caused higher prices.299 Nonetheless, credit-card usage—i.e., output—had increased over the relevant time period.300 As a result, the Court held for the defendant. Justice Thomas’s opinion also endorsed “consumer welfare” as antitrust’s goal.301 Thus, for the first time in a Supreme Court decision, the conflation of output with welfare—the Output–Welfare Fallacy—was on clear display.

Not only did AmEx embrace the Output–Welfare Fallacy, it did so in exactly the type of case where output and welfare can and will diverge. The facts implicated at least three of the categories discussed above: the challenged restraints (1) maintained an information asymmetry; (2) externalized costs; and (3) caused simultaneous and conflicting output effects and simultaneous and conflicting welfare effects, i.e., the Push–Pull Effect.

First, AmEx’s merchant restraints maintained an information asymmetry.302 Credit-card networks and merchants know how much it costs to accept credit cards. But AmEx’s contractual restrictions prevent merchants from communicating that information to their customers.

303 Such restraints can increase output, yet reduce welfare.304 By keeping cardholders in the dark about acceptance costs, AmEx’s restraints propped up demand for its products. Indeed, AmEx conceded that if its cardholders were given accurate information about acceptance costs, at least some of them would decrease their usage of AmEx cards or switch to a different network.305 Some would likely switch to less costly forms of payment, like debit cards. Per standard assumptions regarding revealed preferences, that output reduction would have increased, not decreased, consumer welfare. Thus, the lack of a demonstrable output reduction did not undercut the plaintiffs’ case—if anything, the fact that credit-card usage increased during the relevant time period buttressed the theory of harm.

Second, AmEx’s challenged restraints allowed both it and its cardholders to externalize costs.306 This can harm consumers writ large; it can also harm consumers of the relevant product.307 By stifling competition among card networks, the restraints increase costs for merchants. Yet AmEx’s restraints prevent merchants from passing the additional costs on to the cardholders who trigger them. As a result, merchants are forced to raise prices to all of their customers, including those who pay with cash, checks, money orders, and food stamps.308 AmEx’s merchant restraints allow it to stimulate demand for its product by externalizing the costs of credit-card rewards onto other, more vulnerable segments of society.

Moreover, AmEx’s restraints effectively turn credit cards into a “combatant good.”309 Faced with the choice between paying higher retail prices without receiving any rewards and paying higher prices while receiving some rewards, each individual consumer is incentivized to “defect” and begin using credit cards. But AmEx does not pass all of its supracompetitive profits to cardholders as rewards. Thus, the rewards paid out will not necessarily fully offset the retail price increases—even for cardholders. Especially in sectors where fewer non-cardholders are available to subsidize rewards points, even cardholders can suffer.310 Again, the lack of a demonstrable output reduction in AmEx did not signal that the restraints were procompetitive—to the contrary, it was perfectly consistent with the theory of harm.

Third, the challenged restraints are of a type that will simultaneously push output higher and lower—the Push/Pull Effect. Credit-card networks offer different services to merchants and cardholders, such that the two are not economic substitutes. A merchant faced with higher interchange fees cannot “substitute” to carrying a credit card, nor can a cardholder paying high interest rates “substitute” to accepting credit-card payments.311 AmEx’s restraints increased the price of card-acceptance services for merchants.312 This, in turn, put downward pressure on output of those services. Thus, for example, a massive program of merchant price increases caused some merchants to stop accepting AmEx cards.313 Yet the restraints also allowed AmEx to pass some—though not all—of its supracompetitive profits on to its cardholders as rewards points. By increasing the incentive to pay with credit cards, the restraints put upward pressure on output of cardholder services.314

Nonetheless, Justice Thomas’s opinion required the plaintiffs to prove that AmEx’s restraints caused a net “output reduction.” But the Push/Pull Effect meant that overall output effects were necessarily indeterminate as to the core question of harm. And, given that the challenged restraints maintained an information asymmetry and facilitated a negative externality, the fact that credit-card usage had been increasing actually supported—or was at least consistent with—the plaintiffs’ theory of harm.

*AmEx* is a shoddy opinion. Unless and until it is overruled, it will continue to have harmful consequences for the real-world individuals who bear the brunt of the challenged conduct. In the interim, the antitrust enterprise can safely disregard it as bad law, based on bad economics. Antitrust, more so than most other areas of law, is willing to treat especially bad judicial opinions as lacking any force.315 AmEx should meet a similar fate.

This dark cloud may carry a silver lining. AmEx may continue to be useful as a *negative* illustration. The majority opinion’s double mistake makes it a perfect illustration of why the Output–Welfare Fallacy should be rejected. Not only did Thomas assume that output is the exclusive criterion for analyzing welfare effects, he did so in a case that actually exhibited not just one, but three separate factors that can cause output to diverge from welfare. From the perspective of those who endorse outputism, Thomas and his brethren could hardly have picked a worse case in which to formally embrace it. The du Pont case of an earlier era was flawed, but it is still used in classrooms to illustrate its own mistake—the (in)famous “Cellophane Fallacy.”316 AmEx can similarly be used as a teaching tool to exemplify its own error—the “AmEx Fallacy.”

#### Markets are a computational necessity – we should make them more democratic instead of rejecting them

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

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

Markets as Miracles

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

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

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

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

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

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

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

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

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

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

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

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

Markets as Parallel Processors

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

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

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

Adopting this perspective, we must ask how the market is “programmed” to achieve this outcome. The economy consists of a variety of resources and human capacities at a range of locations, along with a system for transmitting data about these resources among individual human beings. A standard approach in parallel processing is to take information local to one location in, say, a picture or puzzle and assign this to one processor, integrating these inputs on still other processors in a hierarchical fashion. Now apply this image to the economy. In every place, we take one of the computers (humans

) available to us and assign it to collect information about that location’s needs and resources and report some parsimonious “compressed” summary of all that data to other computers. For example, there might be a hierarchical arrangement of computers, with those responsible for particular locations on the ground reporting to a higher “layer” that integrates local areas and then upward from there.

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

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

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

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

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

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

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

#### Competitive pressures increase cybersecurity---creates incentives to respond to vulnerabilities, share info, and take responsibility for security matters.

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Charles Duan, “Of Monopolies and Monocultures: The Intersection of Patents and National Security,” Santa Clara High Technology Law Journal, Vol. 36, Issue 4, Article 5, May 2020, https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1655&context=chtlj

A. Cybersecurity as Competitive Value-Add

Competition enhances national security by reducing the incidence of technical vulnerabilities. That effect is especially important for security-sensitive systems such as mobile telecommunications.

Intuitively, a causal chain from competition to cybersecurity makes logical sense. Computer security is a value-added benefit to consumers, so firms in competitive markets are likely to use security to gain an edge over their competitors.158 In monopolized markets, though, there may be less external impetus to test products for flaws, and the monopolist may choose to focus less on security and more on new product features or increased product quality.

Economic research confirms these hypotheses about competition leading to better cybersecurity. A 2009 empirical study of web browsers considered the impact of market concentration on the amount of time that vendors took to fix security vulnerabilities as they were discovered.159 The study found that the presence of more competitors correlated with faster cybersecurity response—a reduction of 8–10 days in response time per additional market rival.160 Similarly, business researchers in 2005 modeled incentives for firms to engage in sharing of cybersecurity information, and concluded that the “inclination to share information and invest in security technologies increases as the degree of competitiveness in an industry increases.”161 Another study found that, where two software firms are in competition, at least one will be willing to take on some degree of risk and responsibility for cybersecurity, whereas a monopoly software firm will consistently fail to accept such responsibility.162 To be sure, an unpublished study from 2017 found that some market concentration can make firms more responsive to cybersecurity issues, but only to a point: “being in a dominant position reduces the positive effect of having less competitors on the responsiveness of the vendor,” and indeed the “more dominant the firm is, the less rapid it is in releasing security patches.”163 This research confirms that competition is more conducive to cybersecurity.

It is not hard to see how this applies to emerging communication technologies markets. In the absence of competition, the above research suggests that device manufacturers, chip makers, and software developers will lack incentives to respond to vulnerabilities, to share information about cybersecurity practices and issues, and to take responsibility for security matters. Mobile phone chips have had their share of cybersecurity failures already.164 The best way to flush out ongoing and future cybersecurity issues is to maintain competitive pressure at all levels of the supply chain.

#### Capitalism is key to massive improvements in living standards, poverty, and environmental sustainability – any other system shuts that down and worsens environmental and social problems

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Mark Budolfson, “Arguments for Well-Regulated Capitalism, and Implications for Global Ethics, Food, Environment, Climate Change, and Beyond,” *Ethics and International Affairs*, vol. 35, no. 1, 2021, pp. 86-88, https://www.cambridge.org/core/services/aop-cambridge-core/content/view/96F422D04E171EECDEF77312266AE9DD/S0892679421000083a.pdf/arguments-for-well-regulated-capitalism-and-implications-for-global-ethics-food-environment-climate-change-and-beyond.pdf.

Premise 1. Development and the past. Over the course of recorded human history, the majority of historical increases in health, wellbeing, and justice have occurred in the last two centuries, largely as a result of societies adopting or moving toward capitalism. Capitalism is a relevant cause of these improvements, in the sense that they could not have happened to such a degree if it were not for capitalism and would not have happened to the same degree under any alternative noncapitalist approach to structuring society. The argument in support of this premise relies on observed relationships across societies and centuries between indicators of degree of capitalism, wealth, investments in public goods, and outcomes for health, wellbeing, and justice, together with econometric analysis in support of the conclusion that the best explanation of these correlations and the underlying mechanism is that large increases in health, wellbeing, and justice are largely driven by increasing investments in public goods. The scale of increased wealth necessary to maximize these investments requires capitalism. Thus, as capitalist societies have become dramatically wealthier over the past hundred years (and wealthier than societies with alternative systems), this has allowed larger investments in public goods, which simply has not been possible in a sustained way in societies without the greater wealth that capitalism makes possible. Important investments in public goods include investments in basic medical knowledge, in health and nutrition programs, and in the institutional capacity and know-how to regulate society and capitalism itself. As a result, capitalism is a primary driver of positive outcomes in health and wellbeing (such as increased life expectancy, lowered child and maternal mortality, adequate calories per day, minimized infectious disease rates, a lower percentage and number of people in poverty, and more reported happiness);5 and in justice (such as reduced deaths from war and homicide; higher rankings in human rights indices; the reduced prevalence of racist, sexist, homophobic opinions in surveys; and higher literacy rates).6 These quantifiable positive consequences of global capitalism dramatically outweigh the negative consequences (such as deaths from pollution in the course of development), with the result that the net benefits from capitalism in terms of health, wellbeing, and justice have been greater than they would have been under any known noncapitalist approach to structuring society.7

Premise 2. Economics, ethics, and policy. Although capitalism has often been ill-regulated and therefore failed to maximize net benefits for health, wellbeing, and justice, it can become well-regulated so that it maximizes these societal goals, by including mechanisms identified by economists and other policy experts that do the following:

• optimally8 regulate negative effects such as pollution and monopoly power, and invest in public goods such as education, basic healthcare, and fundamental research including biomedical knowledge (more generally, policies that correct the failures of free markets that economists have long recognized will arise from “externalities” in the absence of regulation);9

• ensure equity and distributive justice (for example, via wealth redistribution);10

• ensure basic rights, justice, and the rule of law independent of the market (for example, by an independent judiciary, bill of rights, property rights, and redistribution and other legislation to correct historical injustices due to colonialism, racism, and correct current and historical distortions that have prevented markets from being fair);11 and

• ensure that there is no alternative way of structuring society that is more efficient or better promotes the equity, justice, and fairness goals outlined above (by allowing free exchange given the regulations mentioned).12

To summarize the implication of the first two premises, well-regulated capitalism is essential to best achieving our ethical goals—which is true even though capitalism has certainly not always been well regulated historically. Society can still do much better and remove the large deficits in terms of health, wellbeing, and justice that exist under the current inferior and imperfect versions of capitalism.

Premise 3. Development and the future. If the global spread of capitalism is allowed to continue, desperate poverty can be essentially eliminated in our lifetimes. Furthermore, this can be accomplished faster and in a more just way via well-regulated global capitalism than by any alternatives. If we instead opt for less capitalism, less growth, and less globalization, then desperate poverty will continue to exist for a significant portion of the world’s population into the further future, and the world will be a worse and less equitable place than it would have been with more capitalism. For example, in a world with less capitalism, there would be more overpopulation, food insecurity, air pollution, ill health, injustice, and other problems. In part, this is because of the factors identified by premise 1, which connect a turn away from capitalism with a turn away from continuing improvements in health, wellbeing, and justice, especially for the developing world. In addition, fertility declines are also a consequence of increased wealth, and the size of the population is a primary determinant of food demand and other environmental stressors.13 Finally, as discussed at length in the next section of the essay, capitalism can be naturally combined with optimal environmental regulations.14 Even bracketing anything like optimal regulation, it remains true that sufficiently wealthy nations reduce environmental degradation as they become wealthier, whereas developing nations that are nearing peak degradation will remain stuck at the worst levels of degradation if we stall growth, rather than allowing them to transition to less and less degradation in the future via capitalism and economic growth.15 In contrast, well-regulated capitalism is a key part of the best way of coping with these problems, as well as a key part of dealing with climate change, global food production, and other specific challenges, as argued at length in the next section. Here it is important to stress that we should favor wellregulated capitalism that includes correct investments in public goods over other capitalist systems such as the neoliberalism of the recent past that promoted inadequately regulated capitalism with inadequate concern for externalities, equity, and background distortions and injustices.16

#### Alt fails—it’s vague and undefined—can’t generate coherent way to contest neoliberal concentration

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(Herbert, “Whatever Did Happen to the Antitrust Movement?” Faculty Scholarship at

Penn Law. 1964)

As a movement, antitrust often succeeds at capturing political attention and engaging at least some voters, but it fails at making effective or even coherent policy. The result is goals that are unmeasurable and fundamentally inconsistent, although with their contradictions rarely exposed. Among the most problematic contradictions is the one between small business protection and consumer welfare. In a nutshell, consumers benefit from low prices, high output, and high quality and variety of products and services. But when a firm or a technology is able to offer these things they invariably injure rivals, typically those who are smaller or heavily invested in older technologies. Although movement antitrust rhetoric is often opaque about specifics, its general effect is invariably to encourage higher prices or reduced output or innovation, mainly for the protection of small business or those whose technology or other investments have become obsolete. Indeed, that has been a predominant feature of movement antitrust ever since the Sherman Act was passed, and it remains a prominent feature of movement antitrust today. Indeed, some spokespersons for movement antitrust write, as Louis Brandeis did, as if low prices are the evil that antitrust law should be combatting.17

Nevertheless, mantras such as “industrial concentration” or “big business” have great political force. These terms provide almost nothing in the way of administrable rules while yet evoking an image of something big, bad, and powerful that government must bring under control. For example, here is the plank of the 2016 Democratic Party’s platform on antitrust:

Large corporations have concentrated their control over markets to a greater degree than Americans have seen in decades—further evidence that the deck is stacked for those at the top. Democrats will take steps to stop corporate concentration in any industry where it is unfairly limiting competition. We will make competition policy and antitrust stronger and more responsive to our economy today, enhance the antitrust enforcement arms of the Department of Justice (DOJ) and the Federal Trade Commission (FTC), and encourage other agencies to police anti-competitive practices in their areas of jurisdiction.

We support the historic purpose of the antitrust laws to protect competition and prevent excessively consolidated economic and political power, which can be corrosive to a healthy democracy. We support reinvigorating DOJ and FTC enforcement of antitrust laws to prevent abusive behavior by dominant companies, and protecting the public interest against abusive, discriminatory, and unfair methods of commerce. We support President Obama’s recent Executive Order, directing all agencies to identify specific actions they can take in their areas of jurisdiction to detect anticompetitive practices—such as tying arrangements, price fixing, and exclusionary conduct—and to refer practices that appear to violate federal antitrust law to the DOJ and FTC.18

The antitrust plank never references low consumer prices, or anything having to do with product quality. That is not because Democrats are not interested in low consumer prices.19 Rather, they apparently believe that antitrust has little to do with it. The references to prices occur in other sections of the platform, devoted to such subjects as health and safety and the high price of pharmaceutical drugs. Those sections make no reference to antitrust law.20 The only references to “consumers” occur in planks pertaining to unionization, affordable housing, Wall Street, banks and Dodd-Frank, and clean energy.21 So according to the platform, while legal policy generally is concerned with high consumer prices, antitrust policy apparently is not. By contrast, the 2016 Republican platform never references antitrust, although it does contain a plank promoting a “competitive America,” but focused entirely on lowering tax rates.22

The antitrust plank in the 2016 Democrat platform is actually one of the most detailed to appear in any platform by a major political party.23 The catchphrases that it uses, however—“corporate concentration,” “unfairly limiting competition,” or “abusive behavior by dominant companies”—can mean practically anything depending on assumptions. The platform is peppered with references to “fair” or “fairness,” including the antitrust plank, but with no reference point indicating how fairness should be assessed. Is it “fair” that consumers be asked to pay high prices in order to accommodate the shortcomings of some businesses; or conversely, is it “fair” that small businesses suffer simply because they are not able to compete with larger firms on price or quality; or is it “fair” that firms heavily invested in old brick-andmortar distribution lose out to more technologically entrepreneurial firms? “Fairness” as an antitrust concern means nothing without a reference point or set of measurement tools.

As for specific practices, the antitrust plank in the Democrat platform singles out “tying arrangements, price fixing, and exclusionary conduct,” saying nothing about mergers, other vertical restraints, or anticompetitive patent practices. In fact, the platform never mentions patents, although it makes frequent references to innovation, largely in the context of proposed government intervention to stimulate production24 or to finance research and development and educate people for more technically demanding jobs.25 Of the three anticompetitive practices that it singles out, “price fixing” is completely uncontroversial and has always been a central focus of nearly every articulation of antitrust policy, left, center, and right—including in Bork’s The Antitrust Paradox. 26 The term “exclusionary conduct” is so vague that it is meaningless. Both socially harmful and socially beneficial conduct can be “exclusionary.” The inclusion of “tying arrangements” is mystifying. Tying is ubiquitous in modern economies and is an essential characteristic of networks and technology.27 Further, the vast majority of it is procompetitive because it increases output without excluding anyone. Finally, the number of antitrust tying cases is small in comparison with merger cases, which make up a large portion of antitrust enforcement activity. A major party platform that identifies “tying arrangements” but not “mergers” as a fundamental concern requires an explanation. Most importantly, it seems to miss the whole point of competitive markets, which is to produce a high output of quality, competitively priced goods.

At least in part, the Democratic Party platform reflects the reappearance of movement antitrust. While it is hardly the only expression, and certainly not the most extreme, it represents a troublesome development—namely, the idea that America needs higher prices in order to give smaller firms a fair chance. The platform also gives a reader the strong impression that its slogans were selected in order to achieve maximum political traction with the illiterati, and perhaps that is all that can be expected of a political platform. In the process, however, it does antitrust policy a great disservice by making its legitimate targets almost impossible to define and not providing ammunition for attacking them when they are defined. Its supporters generally disparage the use of economics, sometimes suggesting that antitrust policy should be governed by political theory instead.28 Exactly how political theory gets one to specific antitrust rules is not completely clear, but it involves excluding the opinions of antitrust experts concerning the public’s interest.29

Movement antitrust argues variously for abandoning the measurement of competition by reference to output and price,30 or even abandoning consumer welfare as an antitrust proscription altogether.31 It accuses retailers such as Amazon of engaging in “predatory pricing” without providing a coherent definition of the practice.32 It never explains how a nonmanufacturing retailer such as Amazon could ever recover its investment in belowcost pricing by later raising prices, and even disputes that raising prices to higher levels ever needs to be a part of the strategy, thus indicating that it is confusing predation with investment.33 Charging low but profitable prices indefinitely is not unlawful “predatory pricing”‘ nor is forcing suppliers to price competitively.

#### Alt is worse for sustainability – degrowth/anti-capitalism makes sustained emissions reductions impossible – best models prove

Fickling 20 – Bloomberg Opinion columnist. Citing the International Energy Agency’s most recent World Energy Outlook.

David Fickling, “Capitalism Caused Climate Change; It Must Also Be the Solution,” *Bloomberg Opinion*, 14 October 2020, https://www.bloomberg.com/opinion/articles/2020-10-14/capitalism-caused-climate-change-it-must-also-be-the-solution.

Perhaps instead of trying to make the climate subservient to the needs of expanding gross domestic product, we need to cut our economic coat according to our atmospheric cloth?

The International Energy Agency’s latest World Energy Outlook provides one reason why that’s unlikely to work.

The outlook, released Tuesday, is structured around scenarios reflecting different policy settings and how they’ll affect energy consumption and emissions over the coming decades. This year, two are new: one illustrating the path to net-zero emissions by 2050, and one showing how a delayed recovery from the pandemic might alter the picture.

Such a recession would indeed reduce emissions in the near term. Until 2023, the Delayed Recovery Scenario sends less carbon into the atmosphere than the Sustainable Development Scenario, which is meant to model the path to keeping global warming well below 2 degrees Celsius.

After that, though, things fall apart. Thanks to ongoing economic weakness, governments and businesses lose the capacity to carry out the spending needed to remake the world’s energy system. Investment in fossil fuels falls by 10% relative to expectations under current policies, but spending on renewables and nuclear drops by 5% as well, so that $2.2 trillion less is spent by 2030.

Rather than investing to replace our power plants and appliances with lower-carbon alternatives, we eke out their polluting lives a little bit longer. By 2030, annual emissions are about 29% higher than they would be under Sustainable Development.

This desktop model of how the world could develop reflects a profound truth. The atmosphere can accommodate about 500 billion metric tons more carbon dioxide to give an even chance of keeping warming below 1.5 degrees — but the world’s current industrial base is currently pumping out roughly 33 billion tons a year, and will continue to do so unless we can replace it.

Retrofitting the world’s energy systems is going to require vast sums of money. Renewable power alone will need an average $569 billion of investment every year over the coming decade under the IEA’s Sustainable Development Scenario. That’s almost twice the rate seen over the past five years, and not far behind what the entire oil and gas sector would spend under the same settings. If anything, the world needs a target that’s more ambitious still.

If we can get up to speed, that volume of spending will create its own momentum. One justified complaint of anti-capitalist climate activists is that our political systems frequently put their thumbs on the scale to favor powerful incumbent businesses, which at present are mostly the polluting ones. But a system where investment dollars are flowing away from fossil fuels and toward decarbonization is one where power, too, is shifting away from the carbon economy.

Even under the IEA’s less ambitious Stated Policies Scenario, the $15.14 trillion that gets spent globally on fossil fuel generation and production by 2040 is smaller than the $15.97 trillion spent on renewables and nuclear — and doesn’t include the amounts that go to energy efficiency and grid networks. Under the Sustainable Development Scenario, which has historically often been a better guide to the path of the energy transition, low-carbon power ends up with $2.70 of spending for every $1 going to fossil fuel extraction and generation. That’s a world in which renewables will increasingly set the rules of the game, encouraging governments to remove the remaining subsidies that support oil, gas and coal.

Since the industrial revolution, the fossil-fueled engine of capitalist growth has conspired to put the world in its current climate crisis. Harnessing that power to drive the carbon transition is now our best hope of turning that disaster around.

## 1AR

### Case

#### The causality of their impact is awful

Ghughunishvili 10 – Securitization of Migration in the United States after 9/11: Constructing Muslims and Arabs as Enemies Submitted to Central European University Department of International Relations European Studies In partial fulfillment of the requirements for the degree of Master of Arts Supervisor: Professor Paul Roe <http://www.etd.ceu.hu/2010/ghughunishvili_irina.pdf>

As provided by the Copenhagen School securitization theory is comprised by speech act, acceptance of the audience and facilitating conditions or other non-securitizing actors contribute to a successful securitization. The causality or a one-way relationship between the speech act, the audience and securitizing actor, where politicians use the speech act first to justify exceptional measures, has been criticized by scholars, such as Balzacq. According to him, the one-directional relationship between the three factors, or some of them, is not the best approach. To fully grasp the dynamics, it will be more beneficial to “rather than looking for a one-directional relationship between some or all of the three factors highlighted, it could be profitable to focus on the degree of congruence between them. 26 Among other aspects of the Copenhagen School’s theoretical framework, which he criticizes, the thesis will rely on the criticism of the lack of context and the rejection of a ‘one-way causal’ relationship between the audience and the actor. The process of threat construction, according to him, can be clearer if external context, which stands independently from use of language, can be considered. 27 Balzacq opts for more context-oriented approach when it comes down to securitization through the speech act, where a single speech does not create the discourse, but it is created through a long process, where context is vital. 28 He indicates: In reality, the speech act itself, i.e. literally a single security articulation at a particular point in time, will at best only very rarely explain the entire social process that follows from it. In most cases a security scholar will rather be confronted with a process of articulations creating sequentially a threat text which turns sequentially into a securitization. 29 This type of approach seems more plausible in an empirical study, as it is more likely that a single speech will not be able to securitize an issue, but it is a lengthy process, where a the audience speaks the same language as the securitizing actors and can relate to their speeches.

#### Threats aren’t sufficient to cause war

Reiter 95 – DAN REITER is a Professor of Political Science at Emory University and has been an Olin post-doctoral fellow in security studies at Harvard “Exploring the Powder Keg Myth” International Security v20 No2 Autumn 1995 pp 5-34 JSTOR

A criticism of assessing the frequency of preemptive wars by looking only at wars themselves is that this misses the non-events, that is, instances in which preemption would be predicted but did not occur. However, excluding non-events should bias the results in favor of finding that preemptive war is an important path to war, as the inclusion of non-events could only make it seem that the event was less frequent. Therefore, if preemptive wars seem infrequent within the set of wars alone, then this would have to be considered strong evidence in favor of the third, most skeptical view of preemptive war, because even when the sample is rigged to make preemptive wars seem frequent (by including only wars), they are still rare events. Below, a few cases in which preemption did not occur are discussed to illustrate factors that constrain preemption.¶ The rarity of preemptive wars offers preliminary support for the third, most skeptical view, that the preemption scenario does not tell us much about how war breaks out. Closer examination of the three cases of preemption, set forth below, casts doubt on the validity of the two preemption hypotheses discussed earlier: that hostile images of the enemy increase the chances of preemption, and that belief in the dominance of the offense increases the chances of preemption. In each case there are motives for war aside from fear of an imminent attack, indicating that such fears may not be sufficient to cause war. In addition, in these cases of war the two conditions hypothesized to stimulate preemption—hostile images of the adversary and belief in the military advantages of striking first—are present to a very high degree. This implies that these are insubstantial causal forces, as they are associated with the outbreak of war only when they are present to a very high degree. This reduces even further the significance of these forces as causes of war. To illustrate this point, consider an analogy: say there is a hypothesis that saccharin causes cancer. Discovering that rats who were fed a lot of saccharin and also received high levels of X-ray exposure, which we know causes cancer, had a higher risk for cancer does not, however, set off alarm bells about the risks of saccharin. Though there might be a relationship between saccharin consumption and cancer, this is not demonstrated by the results of such a test.

### K

#### 2---The alt takes all the data and puts it into ONE central authority---that guarantees catastrophic cyber breaches.

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Charles Duan, “Of Monopolies and Monocultures: The Intersection of Patents and National Security,” Santa Clara High Technology Law Journal, Vol. 36, Issue 4, Article 5, May 2020, https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1655&context=chtlj

B. Vulnerabilities of “Monocultures”

A second reason why monopoly undermines cybersecurity is that monopoly leads to a “monoculture” of single-vendor products, opening the door to massive systemic failure in the case of a cyberattack. Computer researchers developed the theory of software monocultures in the early 2000s, in response to the regular phenomenon of computer viruses and other attacks spreading rapidly by exploiting flaws in the dominant operating system at the time, Microsoft Windows.165 Where a computer system such as Windows has a commanding share of users, a virus that exploits a flaw in that system can quickly spread to infect a whole interconnected ecosystem. An operating system monopoly thus enables fast and easy spread of cyberattacks, and better cybersecurity would be achieved through greater diversity in online systems.166 As one research group posited, “a network architecture that supports a collection of heterogeneous network elements for the same functional capability offers a greater possibility of surviving security attacks as compared to homogeneous networks.”167

There has been considerable study of the theory that computer monocultures are naturally more vulnerable to attacks.168 In one study, computer science researchers reviewed a catalog of 6,340 software vulnerabilities recorded in 2007, to compare whether comparable software would share the same flaws.169 Of the 2,627 vulnerabilities applicable to application software (as opposed to operating systems, web scripts, and other software components), only 29 (1.1%) applied to substitute products from different vendors but providing the same functionality.170 By contrast, different versions of a single software product were found to share vulnerabilities 84.7% of the time.171 Thus, software monocultures share exploitable flaws even when there is some variation in versions across the monoculture; by contrast, diversity in software is almost guaranteed to prevent a single flaw from affecting all users.

In the case of 5G and wireless mobile communications, a monoculture is an especially concerning possibility. To the extent that systems such as smart city sensors or communication networks are widely deployed in a monoculture fashion, a widespread attack could have devastating consequences, potentially blacking out a region and affecting essential services such as 911.172 A monoculture that is vulnerable to so-called “rootkits” or “backdoors”—maliciously installed software that enable bad actors to commandeer systems—could also enable mass surveillance or spying by private hackers or foreign governments.173 The presence of systems from multiple vendors would mitigate these possibilities.

The monoculture theory is not without critics, but a review of those criticisms shows them to be inapplicable to contemporary communication technologies. Some critics suggest that software diversity imposes unwarranted costs on firms who must forego economies of scale and devise seemingly duplicative yet different setups of computer systems.174 But those concerns largely focus on the situation where a single firm produces and manages heterogeneous systems, concerns that are avoided where heterogeneity arises naturally through competition between two unrelated firms. Critics also argue that technological measures can create “artificial diversity” through automated randomization of software code, so software engineers can purportedly solve monoculture issues and device users need not worry about the issue.175 But even these critics acknowledge that artificial diversity techniques are often insufficient because they must make assumptions about what aspects of the technology are most vulnerable to attack, and they concede that artificial diversity cannot stop attacks involving operation of legitimate software functions in undesirable ways (sending spam emails or deleting document files, for example).176

It is widely recognized that a monoculture is unavoidable in at least one respect: Most connected devices will need to conform to technical standards.177 5G, for example, is a technical standard developed by a private industry consortium called 3GPP.178 A flaw in any such standard would render all mobile devices implementing the standard vulnerable to an identical attack.179 Avoiding these sorts of systemic flaws in standards requires rigorous development, analysis, and testing of the standard in the development process, which in turn requires ensuring that as many firms as possible, especially firms that share basic American values, are involved in the development of those standards.180 Thus, the necessary standardization of information and communication technologies is perhaps the most important reason why a competitive communication technology market is essential to cybersecurity and national security.