# 1AC v Georgetown AG – Happy Shirley!

## 1AC – Wake

### Adv – Innovation

#### Blockchain will massively undermine status quo antitrust enforcement

Schrepel 19 [Thibault, Assoc Prof of Law at VU Amsterdam Univ, Faculty Affiliate at Stanford Univ CodeX Center, blockchain expert appointed to the World Economic Forum, “Is Blockchain the Death of Antitrust Law? The Blockchain Antitrust Paradox,” *Georgetown Law Technology Review* 3.2, heinonline, JCR] \*edited for ableist language

Because the future evolution of blockchain is unknown, it is difficult to evaluate the scope of the practices that will develop along with it. This article has identified several unilateral anticompetitive practices. They are most likely to occur on private blockchains. However, most of the usual mechanisms of antitrust law will be ineffective in the face of blockchain. 2 3 8 Even with the "regulatory infiltration" proposed using a "law is code" approach, some of the instruments which are used today, such as emergency measures or commitments, will be ineffective in their current form. 239 In the face of blockchain, current antitrust law may well be eliminated. In fact, three factor corroborate this hypothesis. First, antitrust law will probably become ineffective without regulatory infiltration. For the first time in its history, antitrust law will have to be greatly supplemented by regulations taking the form of a "law is code" approach. Indeed, antitrust law will not have complete answers to three issues: how to detect the anticompetitive practices committed on the blockchain, how to identify the actor responsible for these practices, and finally, how to remedy them for the future. While the author of an anticompetitive blockchain can sometimes be identified, the effectiveness of sanctions and remedies may be ~~crippled~~ [undermined] by blockchain's immutability. Presciently, the home page of the Ethereum Project reads: "Build unstoppable applications."240 Thus, even where antitrust law finds a way to regulate blockchains, it may die because it is no longer a creator of welfare on its own. Think of it as the unfortunate death of jazz: the music still exists and has listeners, but jazz no longer creates debate or leads to any movement that ventures beyond its own framework. Second, public blockchains will limit monopolization even when new governance mechanisms are implemented. In particular, predatory pricing and refusal to deal appear to be exceedingly unrealistic, while tying, margin squeezing, exclusionary dealing, loyalty rebates, and exploitative and discriminatory abuses are unlikely to occur. Furthermore, because the transactions implemented on public blockchains are visible to all, the incentive to engage in anticompetitive practices is reduced since market surveillance and industry monitoring can easily root out illegal activity. However, some perpetrators will be protected by the "opacity effect" created by the characteristics of the technology. This is particularly true for private blockchains where entering it, absent regulation infiltration, is technically impossible. In short, anticompetitive practices are expected to be rare on public blockchains, but these practices could be plentiful on private blockchains that operate below authorities' radar. The same issues arise outside the scope of unilateral practices, namely, for collusive agreements where the identification of colluders and the unsuitability of existing mechanisms to stop and punish such practices is equally problematic.241 The third and final reason to expect the death of antitrust law is tied to its foundations. Without a doubt, regulators will find ways to submit blockchains to the law, whether it is by way of regulatory infiltration-which is recommended-or other ways that place the technology at risk, such as the regulation of end users, transportation layers, information intermediaries, blockchain intermediaries, transaction processors or code, architecture or hardware manufacturers-which is not recommended.m But even if antitrust law remains as a body of positive law,24 3 the regulator may end up protecting the existence of antitrust law even though its initial goals are no longer fulfilled. After all, modern antitrust law is built on the premise that the Sherman Act is concerned with trusts.2 44 Without trusts, are antitrust laws needed? This is the "blockchain antitrust paradox": antitrust laws' potential lack of legitimacy (and efficacity) on the one hand and the need to stop anti-competitive practices on the other. Furthermore, the death of antitrust law might not be solely linked to blockchain technicalities. The fate of antitrust law might also be determined by the inherent conflict between the logic of blockchain technology and the logic of antitrust law. Recall that there is no trustee in the sense of a third-party fiduciary within the framework of blockchain. In other words, the target of antitrust laws is absent.245 Blockchain challenges the raison d'etre of antitrust law. Conversely, antitrust law was created for, and is applied by, centralized regulatory agencies, such as the FTC, the DOJ, and the European Commission. Enforcing antitrust law amounts to imposing vertically designed rules and concepts on a technology built around the desire for decentralization.246 But blockchain is used not only for "philosophical" reasons related to its decentralized nature but also because it is practical, and in fact, blockchain's practicability results from its decentralization.247 In short, this opposition between the vertical nature of antitrust law and the horizontal or decentralized nature of blockchain raises a legitimacy concern. The cultural and sociological factors that led to the development of blockchain technology cannot be ignored by the law. As a consequence, on top of all the challenges related to blockchain technicalities, another concern is the legitimacy of antitrust law with respect to this technology. To address this concern, a way must be found to decentralize antitrust law and antitrust authorities.248 This will require a minima to design and implement new governance models using blockchain.250 Antitrust authorities can no longer rely on pyramidal structures nor continue to operate in a closed circle on the model of nation-state-led government. Antitrust law as we know it must die and be reborn. If not, it soon will be illegitimate.

#### Leads to a confrontational regulatory approach, which gets circumvented and guarantees dominance of centralized ecosystems

Schrepel 21 [Thibault, Assoc Prof of Law at VU Amsterdam Univ, Faculty Affiliate at Stanford Univ CodeX Center, blockchain expert appointed to the World Economic Forum, *Blockchain + Antitrust: The Decentralization Formula*, p.238-9, JCR]

Opting for a confrontational approach will put blockchain ecosystems at risk. Let me generalize my findings and return to the MOAF approach to explain why that is. First, a confrontational approach would not be desirable from the regulators' point of view. Aggressive law enforcement would indeed threaten the fundamental principles of encryption and immutability. While that might deter some illegal behaviors, it would also threaten all sorts of beneficial practices that rely on either of these two principles. Thus, the accuracy level would remain low because it would entail numerous false positives and eventually deprive regulators of blockchain's contribution to the common good. In terms of manageability, a confrontational approach would put blockchains under the regulator's control. Enforcing and monitoring costs would be extremely high. This approach would require costly deanonymization services and expansive practices altering the registers, stopping smart contracts and carrying out forks. Second, this approach would also be detrimental to blockchain communities. In terms of objectivity, regulations of this sort could be relatively predictable for private actors, but objectivity would suffer from the resistance of certain blockchain communities. Technical innovations would rapidly emerge to escape regulation, forcing the regulator to continually adapt its regulations and apply them inconsistently. In terms of flexibility, this confrontational regulation would open the blockchain fortress with a tank. It would be highly coercive. New regulations would forcibly impose enforcement mechanisms on all blockchain communities — or, at the very least, on a (large) part of them — by eliminating some of the technology core characteristics. In other words, implementing regulations of this sort would be like using a sledgehammer to crack a nut. This is not a pretty picture." Blockchain is still a burgeoning technology and adopting a confrontational approach would end up removing some essential features for its survival against other species (i.e., centralized ecosystems). Alternatively, these regulations would be ineffective, as communities would work to escape the rule of law. If confrontational law lags behind the technology, its enforcement will partially be held in check for the reasons I have discussed. If, on the contrary, confrontational law is ahead of technology, the latter will circumvent and escape it by eliminating control mechanisms and changing governance and incentives (not always for the better). This will be limited, as only the most advanced part of the community would succeed; but that fraction would take a chunk of the users with it. The rule of law would not regain its full primacy. In fact, we have seen this already. When the New York State Department of Financial Services imposed a requirement to obtain a "BitLicense" before engaging in Bitcoin activities?' several startups moved to New Jersey. If developers cannot vote with their computers, they vote with their feet by relocating their operations. This affects all users. In a nutshell, one must reject the confrontational approach because it allows neither the law (here, antitrust) nor the technology (here, blockchain) to fully achieve its objective. One must find another way to enter blockchain ecosystems. I offer an alternative option in that regard.

#### US failure to adapt to blockchain tech is causing a massive soft-power shift to the Indo-Pacific – wrecks leadership and crushes growth for decades. Leads to walled gardens that disrupt international trade.

Wintermeyer 21 [Lawrence, co-founder of Global Digital Finance, a non-profit promoting fair and transparent markets, former CEO of Innovate Finance, the UK FinTech members association, “Will The Revolution Be Tokenized: Governments, Blockchain, And The Digital Space Race,” 10/06/21, <https://www.forbes.com/sites/lawrencewintermeyer/2021/10/06/will-the-revolution-be-tokenized-governments-blockchain-and-the-digital-space-race/?sh=337f9b7e5170>, accessed 10/29/21, JCR]

In 2015 The Economist magazine hailed blockchain as “the trust machine”, capable of replacing governance structures, displacing institutions, and bringing a new level of transparency to transactions and information, with implications across public life. In the years since, the technology has produced trillion-dollar decentralized financial markets and a slew of innovation over blockchains especially in financial services, with the rise of bitcoin, stabelcoins, decentralized finance or DeFi, Central Bank Digital Currencies (CBDCs), and other industries such as shipping, logistics and supply chains are starting to scale use cases. OECD research, however, shows little breakthrough in blockchain innovation in government and minimal impact in the public sector - the technology is often described as a solution in search of a problem. While the technology is rapidly maturing, we are starting to see governments take an interest in blockchain and distributed ledger technology (DLT) in areas such as tax, standards and certification, digital identity, and data privacy. For governments, assessing blockchain’s disruptive potential is both a practical challenge and a philosophical one. The raison d’etre of many public institutions is the provision of public goods, and the underwriting of rights and the social contract – functions that blockchain’s pioneers sought to replace with cryptography, networks, and protocols. Whether this technology will be used to displace or complement traditional governance models is an open question, as is its ability to deliver such transformation. This year’s opening discussion at the OECD’s 4th Annual Blockchain Policy Forum addressed several the main opportunities and challenges at the intersection of technology and governance to disentangle blockchain’s promise from reality and explored the extent to which the technology can and should be guided by governments towards better models of social and economic connection. “In global trade, the leaders in blockchain technologies are the Indo-Pacific based governments like China and Singapore. Trade is the lifeblood of this region which is considered the global trading hub. China and Singapore have been early to understand the benefits of the blockchain for supply chain management, not just for the provenance and tracking of goods, but for tax, customs, and digital rights. “Blockchain has dramatically scaled the 14th century Venetian innovation of the double-ledger into a theoretically infinite multidimensional ledger which is public, open, transparent, and immutable, and secures access using cryptography. It’s like another layer of the Internet, with greater resilience against cybercrime, and integrates multiple stakeholders in much better management of the economy,” says Alex Sandy Pentland, MIT professor and director of MIT Connection Science. In a world with geo-political turbulence and trade headwinds, digital leadership in sectors like central bank digital currencies and supply chains using new digital technologies really matter – welcome to the digital space race. The intellectual property, technologies, and standards in blockchain are now being used to gain a global foothold in trade. Importantly, this is helping to drive rapid adoption with low friction use cases and easy to access services. Blockchain is helping counties that are early movers and leaders in this space to position themselves to generate decades of industrial, societal, and economic growth. “Governments need to learn how to adopt and adapt to polycentric governance models to better engage the broad range of actors and stakeholders required to compete in the digital world without having to create new overarching bureaucratic institutions,” says Primavera De Filippi, permanent researcher at the National Center of Scientific Research in Paris (CNRS) and faculty associate at the Berkman Klein Center for Internet & Society at Harvard University. Most of the blockchain DLT technologies are developed in open source with large pools of developers participating by voting through digital protocol governance models which extend in many protocols to other entities becoming governance nodes. This is akin to a large mutual society and is risk adjusted both by the volume of experienced participants and stakeholders and its polycentric nature. “There are two big benefits for governments building out their programs on the blockchain; the first is COLLABORATION – governments can attract a larger and more diverse range of stakeholders to build out and adopt the digital infrastructure for trade, tax, identity, financial services, etc., and use the power of the crowd – this is markedly different to large enterprise software projects which have significant concentration risks including the number of commercial stakeholders that can engage. The second is CERTIFICATION – governments can move away from using “sticks” by offering “carrots” to stakeholders that exhibit measurable compliant behaviors – this could dramatically change the way we look at regulation and compliance. “This is all achievable through smart contracts on the blockchain and can be accomplished now without new contract law if we adopt “functional equivalence” for smart contracts, just as we adopted it moving from paper to electronic contracts. The only big decision that governments need to make upfront is whether to use public or private blockchains, or a mix, and this decision merits significant consideration of the specific use case,” says De Filippi. Adds Pentland, “there is a great transfer of “soft power” taking place with blockchain technologies, and when it comes to trade, it is Indo-Pacific led. It is important as the systems grow that they focus on a level of interoperability with each other through standards, to ultimately deliver the benefits that distributed ledger technologies offer – multi-dimensional participation. If countries seek to go down the “walled garden” route, interoperability will go down the drain and the global trade system will be open to further arbitrage opportunities by those that seek to exploit this situation.” Governments and industry must recognize that blockchain is now mature, here to stay, and ready to use, today. The technology is more than a decade old and the underlying technologies of distributed databases, cryptography, and peer to peer networking have been with us since the dawn of computing. Software developers are delivering blockchain use cases to market quicker than most industries, governments, and regulators can keep up with – that is the power of the polycentric networked crowd. There is more innovation going on outside your four walls than inside, and you need to know how to plug into it. As is often the case, it is the systematic factors coupled with institutional bias that are barriers to governments and managers understanding how and when to mobilize new innovative technologies and methods for society, and in many instances, few are really incentivized to make it happen. The blockchain revolution provides “the platform” to engage large numbers and dimensions of stakeholders in the economy through shared mutual governance – the major incentive is already there, it is baked into the governance model – greater and more efficient economic participation in the economy. Governments would be wise to be serious about prioritizing the digital space race. If the revolution is tokenized, it will be because large public blockchain consensus protocols are tokenizing it, and large swathes of global business and consumers are using it.

#### Trade prevents global conflict – incentives for self-regulation by great powers.

Gallea and Rohner 21 (Quentin; Post-Doc researcher in Political Economy at the University of Lausanne and E4S, and Dominic; professor of Political and Institutional Economics at HEC Lausanne, 9-21-21, Globalization mitigates the risk of conflict caused by strategic territory, PNAS September 28, 2021 118 (39) e2105624118; <https://doi.org/10.1073/pnas.2105624118>) MAM

We start by running a very sismple regression specification before gradually increasing complexity. In particular, we focus first on comparing areas with high strategic importance scores (according to our measure) with cells for which our algorithm has found a lower strategic importance (i.e., that are further away from maritime choke points). Our main explanatory variable is “proximity” (to the nearest choke point), and the dependent variable of interest is the likelihood of experiencing at least one violent event in a given cell and year. The goal of this initial table being to report the parsimonious “raw” correlation, we limit ourselves to controlling for latitude fixed effects (i.e., a specific constant term for each latitude, filtering out climate zone effects and earth perimeter# ) and annual year dummies (which account for global shocks). All methodological details of this specification are provided in SI Appendix.

The regression analysis of Table 1 reveals that overall areas closer to maritime choke points face a greater risk of conflict, as shown by the fact that in all columns, the proximity variable has a positive, statistically significant coefficient. This holds when including a dummy for any violent event (column [col.] 1) and also for various subcategories of violent events (col. 2–4). It is imprecisely estimated for a violence intensity measure (col. 5). The effect is quantitatively sizable, as one SD greater proximity (i.e., 1,100 km closer to a choke point, corresponding to the straight-line distance from Paris to Rome or New York to Chicago) in the main specification (col. 1) corresponds to a 0.31-percentage-point increase in conflict risk, which is about a fifth of the baseline conflict risk for a given cell and year (1.5%). Note that the results of col. 2–4 show that the quantitatively largest effect emanates from state-based conflict (col. 2).

Next, we investigate the main prediction of our game-theoretic model (SI Appendix), namely, that while proximity to maritime choke points increases the conflict risk for moderate levels of trade openness, for peak levels of globalization, the prediction reverses, and locations of strategic importance are expected to benefit from a relatively low likelihood of conflict. We illustrate graphically how the locations of strategic choke points relate to conflict events—both for periods of high trade (Fig. 2 A and C) and low trade (Fig. 2 B and D). We zoom in on key strategic regions: Panama Canal and Cape of Good Hope (a full map of the world is depicted in SI Appendix). Visual inspection suggests—in line with our predictions discussed above—that strategic territory may bear a conflict potential, in particular, during periods of low trade, while in times of high trade volumes (when major powers are particularly keen to keep world trade routes open and secure), conflicts may be less concentrated around choke points. While these associations are interesting, they could be driven by various confounders, and, hence, we need to perform in what follows an in-depth regression analysis.

At present, we move to a regression analysis with this interactive effect. Note that SI Appendix presents a simplified regression specification (featuring the same controls as in Table 1) and provides all methodological details for the more demanding main specification that we shall now discuss. This main regression specification features, as before, as dependent variables several measures of violent events. As a main explanatory variable, we still focus on the proximity to maritime choke points, but now not only as a linear term, but also in interaction with a measure of world trade openness (imports plus exports) in percentage of world GDP. In this main baseline specification, we include a more stringent set of controls. As before, we control for annual time dummies (which account for global shocks) and latitude fixed effects (capturing, among others, climate zone effects, earth perimeter, and cell size), but now we also control for country fixed effects. These different constant terms for each country allow us to control for any time-invariant country characteristics (such as colonial heritage, tradition of autocracy, country size, geographical features, etc.), and, hence, our identifying statistical variation stems from comparing different locations of the same country (e.g., Medellin with Bogota or Miami with Nashville). Note that controlling for annual time dummies picks up the world trade openness measure (which takes the same value for each country and varies annually), which, hence, is dropped.

The results are displayed in Table 2. Consider the main specification of col. 1, where the linear effect of proximity has a statistically significant positive coefficient, whereas its interaction with world trade openness has the expected negative sign. This means that strategic territories face, on average, a higher conflict risk in periods of low trade openness, while with greater trade openness, they are relatively more shielded from armed conflict, which is fully consistent with our gametheoretic model in SI Appendix. This result carries over for subcategories of conflict (col. 2–4) and for a conflict intensity variable (col. 5). The results of Table 2 are represented graphically in Fig. 3.

The impact is quantitatively sizable, as moving one SD (1,100 km) closer to a choke point increases by 0.4 percentage pointsk (24.8% of the unconditional baseline risk) the conflict likelihood in periods when trade openness is low (0.4), while reducing it by 0.2 percentage points∗∗ (12.1% of the conflict baseline risk) when trade openness is high (0.6).

In SI Appendix, we present the details of all specifications used in the main text, in addition to results for alternative specifications. In particular, we go one step further by running the same regression, but including controls for cell fixed effects. These constant terms are specific to each cell of 0.5 × 0.5 decimal degrees (55 km × 55 km at the equator) and, hence, filter out all time-invariant characteristics of this very fine-grained local area. In particular, this controls for the potentially confounding impact of elevation, microclimate, sea access, ruggedness of terrain, river proximity, and historical road network, to name a few. This specification is described in detail in SI Appendix. It is shown that all our results go through in this demanding specification and that the interaction term of interest between the proximity to maritime choke points and world trade openness continues to have a statistically significant negative sign in all specifications.

Next, in SI Appendix, we perform further robustness checks. We start by setting up an alternative specification to estimate the direct effect of world trade openness. We find a conflict-reducing effect of trade, and the coefficient of our main interaction term of interest remains robust to this alternative specification. Next, we investigate whether the interaction of world trade openness and proximity does not pick up the role of other factors, such as global military tensions, demographic changes, or democratization. Our results prove robust to controlling for the interactions of the these variables with proximity to choke points. Furthermore, we explore a series of alternative ways of defining choke points and building our proximity measure (such as choke points without manmade shortcuts [Panama and Suez canals]).

A further robustness check carried out in SI Appendix is to allow for a nonlinear impact of proximity to choke points, running tercile and quartile regressions, as well as focusing on immediate proximity to choke points (top 5 percentile, equaling 200 kilometers). Similarly, in another sensitivity test, the proximity to the closest coast and an interaction between this proximity and world trade openness are included. Our results are robust to this change and highlight that using our complex proximity-tochoke-points measure yields substantial additional explanatory power beyond the simple proximity-to-coast measure. Finally, the robustness analysis in SI Appendix shows that the results are robust to using an alternative data source for conflict [GDELT (20)] and to alternative clustering of SEs (at the country level, administrative level 1, or spatial clustering).

Last, but not least, in SI Appendix, we present a substantial extension of our statistical model, going beyond a simple robustness check. Specifically, we augment our specification by including an interaction between our proximity-to-chokepoints measure and a dummy for defense-cooperation agreements. This model shows that our main specification is robust to this inclusion and that having a defense-cooperation agreement is a complement to trade in terms of security, yet with a somewhat smaller effect. This highlights the usefulness of both informal trade incentives and formal defense-cooperation agreements for fostering peace close to strategic choke points.

Discussion

Our results suggest that—as predicted by our game-theoretic model—being located nearby maritime choke points is a mixed blessing. Being close to such a strait or bottleneck usually bears significant risks, as controlling such neuralgic locations conveys a series of rents and benefits. At the same time, in periods of high globalization and booming world trade, influential major powers have strong incentives to mediate local conflicts in order to guarantee the smooth operation of crucial waterways. We indeed find in our data that while, overall, places closer to choke points had more conflict, this reverses when world trade flows are large enough. Thus, while globalization may be responsible for some ills, it would be unfair to blame it for military combat over the control of locations of high strategic importance.

On a more general level, our findings are consistent with the view that global security coordination to mediate local disputes is a global public good that may be underprovided. Local fighting over controlling waterway bottlenecks creates a series of negative externalities worldwide (see, e.g., ref. 21). It is key to step up international coordination to ensure that disputes get mediated on a more regular basis, and not just when it is lucrative for major powers to do so. As stressed in the seminal work of ref. 22, collective action problems can be solved if one contributor (in our case, a major power or a military alliance such as NATO) has large enough incentives to provide a public good (in our context, free and safe access to global waterways). However, relying on this is often inefficient, as there are lots of situations where no single contributor has high-powered enough incentives to step up efforts, but collectively, all states would benefit from the provision of the global public good. Avoiding “free riding” and solving collective action problems are classic challenges studied in economics—in our context, a natural solution could be an increased role for supranational organizations, such as the United Nations, in guaranteeing free and safe maritime transport.

#### Leadership on digital trade reinvigorates partnerships in the Indo-Pacific.

Bera and Cutler 10/8 (Ami Bera, Congressman for Sacramento/California District 7, and Wendy Cutler, Vice President at the Asia Society Policy Institute (ASPI), 10-8-21, Bring Washington Back to the Table, The Diplomat, <https://thediplomat.com/2021/10/indo-pacific-trade-bring-washington-back-to-the-table/>) MAM

If there is one major tenet that sets apart the foreign policy approaches of U.S. President Joe Biden and former President Donald Trump, it is this: Abandoning American leadership in the international community cedes the power to set international norms, rules, and values to other nations. Rejoining various multilateral organizations and agreements and reinvigorating our global partnerships, in areas like COVID-19 response and climate change, are welcome steps by the Biden administration. However, international engagement should not stop there. Rather, the Biden administration should build on this model and prioritize a forward-looking and impactful economic and trade agenda with the Indo-Pacific region, particularly in working with like-minded regional partners to **set the rules of the road on digital trade.** We were both involved in boosting our economic engagement with the Indo-Pacific region during the Obama administration, one as a senior official at the Office of the U.S. Trade Representative (USTR), the other as a member of Congress working to build support for and provide oversight of the president’s agenda. What we experienced during that time was the United States taking the lead in developing policies to open markets for U.S. exporters, workers, and farmers, while also using the United States’ prestige and leadership to foster more pro-worker, pro-democracy, and pro-consumer policies in the region. Make no mistake — the effort to remove trade barriers and expand economic opportunity in the Indo-Pacific has continued, with countries in the region actively working on agreements among themselves and with nations in other regions. The countries of the region are talking, debating, and negotiating over trade policies to help promote growth, create jobs, and improve livelihoods for their citizens. While taking place far from Washington, these discussions are impacting our economy, given global supply chains and future agreements the U.S. may want to develop. But right now, we’re not at the table. Biden and USTR Ambassador Katherine Tai have made it clear that they want to take a thoughtful approach on U.S. trade policy, particularly to ensure it continues to be pro-worker and pro-environment. We don’t disagree, having seen both the policy and political benefits when forces aligned during the re-negotiation of NAFTA that resulted in USMCA. There were improvements, compromises, and tough decisions made all around, and the agreement is better for it. That’s why we strongly believe the United States must continue that work and look for opportunities elsewhere to expand economic opportunity, lead with our values, and develop policies that benefit the U.S. and like-minded partners. One important way the U.S. can do this is by working on a regional digital trade agreement with our friends in the Indo-Pacific region. Digital trade touches all sectors of our economy, including manufacturing and agriculture, and involves rules around access to the internet, digital inclusiveness, trade facilitation, sharing and storage of data, and others — all critical issues for which rules and norms and policies are still being developed and decided, and which grow in importance every single day. As other countries are far along in this work with each other, we risk losing the opportunity to shape policies that directly affect American citizens and businesses here at home. We’re also losing the opportunity to ensure the policies that ultimately get enshrined are ones that prioritize democratic values, such as a free sharing of ideas and information, individual privacy, and business and consumer protections. We remain optimistic that the Biden administration will succeed in repositioning the United States as a force for good and a force for international cooperation after four tumultuous years under the previous administration. There is no better way to do that than by advancing economic opportunity and freedom of choice in one of the most economically important and dynamic regions in the world – the Indo-Pacific. The Biden administration has a unique window of opportunity to do so. We hope they seize it before the table is set without us.

#### That solves global existential risks – it’s reverse causal.

Joseph S. Nye Jr. 20. Harvard University Distinguished Service Professor, Emeritus. "COVID-19’s Painful Lesson About Strategy and Power". War on the Rocks. 3-26-2020. https://warontherocks.com/2020/03/covid-19s-painful-lesson-about-strategy-and-power/

In 2017, President Donald Trump announced a new National Security Strategy that focused on great-power competition with China and Russia. While the plans also note the role of alliances and cooperation, the implementation has not. Today, COVID-19 shows that the strategy is inadequate. Competition and an “America First” approach is not enough to protect the United States. Close cooperation with both allies and adversaries is also essential for American security.

Under the influence of the information revolution and globalization, world politics is changing dramatically. Even if the United States prevails in the traditional great-power competition, it cannot protect its security acting alone. COVID-19 is not the only example. Global financial stability is vital to U.S. prosperity, but Americans need the cooperation of others to ensure it. And while trade wars have set back economic globalization, there is no stopping the environmental globalization represented by pandemics and climate change. In a world where borders are becoming more porous to everything from drugs to infectious diseases to cyber terrorism, the United States must use its soft power of attraction to develop networks and institutions that address these new threats. For example, this administration proposed halving the U.S. contribution to the World Health Organization’s budget — now we need it more than ever.

A successful national security strategy should start with the fact that “America First” means America has to lead efforts at cooperation. A classic problem with public goods (like clean air, which all can share and from which none can be excluded) is that if the largest consumer does not take the lead, others will free-ride and the public goods will not be produced. As the technology expert Richard Danzig summarizes the problem:

Twenty-first century technologies are global not just in their distribution, but also in their consequences. Pathogens, AI systems, computer viruses, and radiation that others may accidentally release could become as much our problem as theirs. Agreed reporting systems, shared controls, common contingency plans, norms and treaties must be pursued as a means of moderating our numerous mutual risks.

Tariffs and border walls cannot solve these problems. While American leadership is essential because of the country’s global influence, success will require the cooperation of others.

On transnational issues like COVID-19 and climate change, power becomes a positive-sum game. It is not enough to think of American power over others. We must also think in terms of power to accomplish joint goals, which involves power with others. On many transnational issues, empowering others helps us to accomplish our own goals. The United States benefits if China improves its energy efficiency and emits less carbon dioxide, or improves its public health systems. In this world, institutional networks and connectedness are an important source of information and of national power, and the most connected states are the most powerful. Washington has some sixty treaty allies while China has few. Unfortunately, as Mira Rapp-Hooper recently argued, the United States is squandering that power resource.

In the past, the openness of the United States enhanced its capacity to build networks, maintain institutions, and sustain alliances. But will that openness and willingness to engage with the rest of the world prove sustainable in the current populist mood of American domestic politics? Even if the United States possesses more hard military and economic power than any other country, it may fail to convert those resources into effective influence on the global scene. Between the two world wars, America did not and the result was disastrous.

#### Effective regulations key to US competitiveness in blockchain – organizations want reliable and stable regulatory environment to build trust

Werbach 18 [Kevin, Professor of Legal Studies & Business Ethics at the Wharton School, FCC Agency Review Co-Lead, “Trust, but Verify: Why the Blockchain Needs the Law,” *Berkeley Technology Law Journal* 33, heinonline, JCR]

One difference between the regulatory debates in the dot-com and distributed ledger eras is that the United States is no longer the dominant source of activity. The Internet today is highly globalized, but in the 1990s, usage and startup creation were heavily centralized in the United States. In contrast, there are concentrations of distributed ledger activity around the world. London, Berlin, Switzerland, and Singapore are major hubs, with significant centers in mainland China, Canada, South Korea, Japan, Estonia, Argentina, and Hong Kong.209 Vitalik Buterin, leader of the Ethereum project, is a Russian who grew up in Canada, heads a foundation headquartered in Switzerland, and now lives in Singapore. If he had created an early Internet startup, he would have likely headed to Silicon Valley. The global distribution of blockchain development activity encourages jurisdictional competition among regions. U.S. dominance of the early Internet industry produced major benefits, both economic and in terms of global soft power. Hoping to be the Silicon Valley of the crypto economy, countries ranging from tiny Gibraltar to Russia are creating new legal frameworks to attract blockchain startups, coin offerings, and other activity. The early leader is the canton of Zug, Switzerland, which combines a stable government, a central location in Europe, a welcoming environment for cryptocurrency companies, and very favorable tax policies. 210 It is bidding to be the cryptocurrency equivalent of Delaware for U.S. incorporation, although the real Delaware, among other locales, seems determined to compete. The U.S. is still a very important driver of blockchain activity. A significant portion of core Bitcoin development occurs in the United States. New York is one of the primary centers for distributed ledger technology in financial services. Many of the most significant investors in blockchain startups are in the United States, including Digital Currency Group, Blockchain Capital, Andreessen Horowitz, and Union Square Ventures. U.S. technology and services firms such as IBM, Microsoft, and PwC are at the forefront of most large-scale enterprise implementations of distributed ledger applications. The technical talent and technology startup ecosystems in the United States remain unmatched. It bears repeating that major Internet companies did not locate in Sealand or island tax havens; they went to where the developers and customers were. Organizations do not just seek the least regulation; they seek the best regulation, among a slate of other factors. A reliable and stable regulatory environment will be important for building trust in blockchain platforms that seek a large user base. Similarly, even jurisdictions keen to attract entrepreneurial businesses in fields such as cryptocurrency do not simply engage in a race to the bottom. Singapore is a hotbed of blockchain activity, due in part to its permissive regulatory attitude. However, the Monetary Authority of Singapore made clear in an August 2017 announcement that initial coin offerings there would be subject to money laundering and terrorist financing restrictions.' They would also be regulated as securities offerings when they "represent ownership or a security interest over an issuer's assets or property. "212 Some small territories focused on generating revenues may take an "anything goes" attitude, but ICOs based there will eventually be less trusted and therefore less successful in attracting capital. Moreover, the countries where that capital comes from will not be shy about exercising jurisdiction. These are the same reasons why all companies today do not domicile in offshore tax havens. While the BitLicense may have given the United States a poor regulatory reputation in some cryptocurrency circles, more recent initiatives were more thoughtfully drawn. The Uniform Law Commission, which creates model codes that are widely adopted by state legislatures, adopted a model cryptocurrency law in 2017 that limits the scope of regulation.213 The CFTC created a LabCFTC group to study cryptocurrencies and engage with the nascent industry.214 The SEC's investigative report on initial coin offerings and The DAO was widely praised as measured and technically knowledgeable.21 s There is no certainty that the United States, or any jurisdiction, will strike the appropriate balance between flexibility and protection in its regulatory approaches to blockchain-based systems. The debates have just begun. Overall, though, regulators who do nothing will be a greater threat to the development of the market than those who engage in thoughtful and evolving efforts to address public policy considerations.

#### Focusing antitrust law on practices that artificial centralize blockchain creates synergy that assures cooperative relationship between blockchain & antitrust – solves regulatory certainty and innovation

Schrepel 21 [Thibault, Assoc Prof of Law at VU Amsterdam Univ, Faculty Affiliate at Stanford Univ CodeX Center, blockchain expert appointed to the World Economic Forum, *Blockchain + Antitrust: The Decentralization Formula*, p.75-8, JCR]

In fact, antitrust law and blockchain ecosystems seek decentralization at two different levels. Antitrust law prohibits certain categories of conduct, creating tensions with tech communities without focusing much on digital architectures. Blockchain, on the contrary, seeks to decentralize by providing its users with a specific digital architecture. It does not prohibit (anticompetitive) practices where code allows. This creates tensions between them, as I show in Part 2 of this book. Their cooperation will require the identification of ways to deal with these mutual provocations, as I will explain in Part 3. As things stand, both of these communities exhibit what Veblen called "trained incapacity" — the difficulty to think beyond a set of constraints and assumptions. Policymakers tend to believe that the law should be the most important constraint organizing our lives. For that reason, legal rules are often applied without looking for ways to coordinate with other constraints, including digital architectures." In the meantime, blockchain communities tend to view legal enforcement as an adversary, and not as an ally, As John Perry Barlow stated in 1996: "I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather." After all, the law liberates, but it also implies illegality, lawsuits, liability assignment and sanctions. The antitrust and blockchain communities will gain from over-coming these biases. If we want antitrust and blockchain to collaborate on a long-term basis, we need to talk about the problems that their cooperation will encounter along the way. The challenge before us is intricate." On the one hand, it is a matter of getting legal minds to recognize that technology can help achieve objectives that the law cannot achieve on its own. There are three reasons for this. First, blockchain provides a technical approach to the subject. It serves as a framework for decentralizing the economy by default, while antitrust mostly applies ex post by correcting past behaviors." Second, antitrust agencies' detection rate remains low, meaning that illegal behavior often goes unpunished." And enforcement is costly, which makes it impossible to pursue all potentially illegal practices. This is particularly prob-lematic in a world where illegal practices can be implemented through coding that quietly and immediately affects billions of users. Also, the rule of law is (unfortunately) inapplicable in some places. This is the case when the state bypasses legal constraints,'" and when jurisdictions are mutually unfriendly and do not enforce foreign laws." For example, enforcement of U.S. court judgments abroad can prove especially difficult in light of divergent rules on jurisdiction, requirements for special service of process, reciprocity and some foreign countries' public policy concerns," including in Europe." Finally, antitrust law is complex and cannot be fully mastered by all companies — the compliance costs are high and many firms unwittingly infringe the law. Blockchains could therefore supplement antitrust by creating an architecture that leads to fewer anticompetitive practices. On the other hand, blockchain communities would gain from working with (not against) antitrust law enforcers. That is because antitrust would eliminate practices that artificially centralize blockchain ecosystems and that blockchain architecture cannot stop or prevent. I will analyze them in Part 2. Doing so would also provide legal certainty, thus fostering investments and benefiting all the actors involved in commercial activities that rely on blockchain. For these reasons, one should think of antitrust and blockchain as allies —not enemies — as they both seek the same objective, while presenting complementary strengths and defects. Doing so would lead policymakers to promote and implement a new "law + technology" approach that recognizes that the benefits of cooperation outweigh those of one-off confrontations. A game theorist would represent that approach as illustrated in Figure 5.1. That bigger picture should guide every one of our actions in the field, including how we deal with mutual aggressions. After all, no great player has ever won a game of Go without conceding a few territories. In this chapter, I first discussed decentralization in the context of antitrust law. I showed that antitrust law's objective has always been to free markets from economic coercion. In other words, it protects consumers by ensuring the decentralization of market players' decision making. The Sherman Act translates that objective, and so does the TFEU. Despite having a similar objective, I explained that blockchain and antitrust do not automatically benefit from one another — their cooperation must be willingly enacted. Mainly, there are situations in which the law cannot be (fully) enforced. That is true when technology (such as blockchain) prevents legal enforcement and when the rule of law is not actionable (because one country is disregarding it, or because two jurisdictions are unfriendly). In other situations, the law interferes with technology developments; it creates a different type of tension. That absence of mutual assistance between blockchain and the law would be problematic at two levels. First, it would be troublesome because blockchain could achieve decentralization in areas where the law does not apply. And second, by increasing the number of transactions executed, blockchain will simultaneously increase the number of anticompetitive practices that take place. Antitrust will thus be needed to eliminate these practices. This latter point — how blockchain may (be used to) violate antitrust — is the subject of Part 2 of this book. When entering it, let us keep in mind that the "big picture" (the mutually beneficial nature of the cooperation between antitrust and blockchain) must inform how we deal with the "small one" (areas of tension between them). Failure to do so would lead to a lose-lose situation.

#### Antitrust action against artificial centralization is key to collaborative relationship between antitrust agencies and blockchain communities. Necessary for long term economic stability

Schrepel 21 [Thibault, Assoc Prof of Law at VU Amsterdam Univ, Faculty Affiliate at Stanford Univ CodeX Center, blockchain expert appointed to the World Economic Forum, *Blockchain + Antitrust: The Decentralization Formula*, p.247-9, JCR]

1.2.1 Not this... Enforcement is the second pillar of a collaborative approach between law and tech, antitrust and blockchain. I realize that this may seem counterintuitive; enforcement is, by definition, confrontational. In reality, distinct types of enforcement can lead to varying degrees of confrontation: some harm the entire blockchain, while others target the sole perpetrators of illegal practices. One should avoid the former, as it would reduce blockchain's usefulness and thus deprive policymakers and regulators of an important ally. It is in the interests of both communities to encourage the latter. I concluded the first part of this book by underlining that making law and tech work toward the same objective implied bearing with some assaults by each on the other. This means that blockchain communities should not only tolerate antitrust sanctions, but also facilitate them, because they ultimately lead to further decentralization. It also means that antitrust agencies and courts should direct their enforcement activities in a specific way. Overall, they should seek to preserve blockchain. This will be challenging, as agencies generally conduct their enforcement activities one case after the other, without such a long-term objective. That being said, agencies could still achieve the overall goal of enabling blockchain technology to flourish while ensuring case-by-case enforcement. For that, agencies should avoid enforcement activities against practices that directly arise from the intrinsic characteristics of a blockchain. For example, public permissionless blockchains distribute information throughout the marketplace, including the number of transactions implemented by specific users, the fees being paid and so on. This transparency could lead to antitrust concerns, especially when it comes to tacit collusion.'" Nevertheless, because this essential feature makes markets more fluid and mitigates information asymmetry," enforcement activities should not be directed at it. The same goes for the opacity that blockchains create. As we have seen together, the identity of a blockchain's participants and the content of their transactions are protected by encryption. Yet one should not consider this a relevant element in European competition law for presuming the intention to collude (moral component), for systematically making cartelization on block-chain a restriction "by object" rather than "by effect," or for easing the burden of proof on antitrust agencies. Doing so would deter legal uses of blockchain. More generally, it is important to underline that all blockchain participants agree to the same set of rules. That should not be seen as an illegal agreement between them, even though it affects their economic behavior. Agreeing to the same rules is, in fact, necessary for blockchain's survival, as it creates consistency in the blockchain ledger in the absence of central coordination. It solves the Byzantine Generals Problem, according to which a central power is always needed to coordinate actions and maximize outcomes. That applies to forks, which should only rarely be seen as illegal (as I discussed in Chapter 8), because they create checks and balances within each blockchain. Let me reiterate that without consensus regarding the rules and their modification, the whole system would collapse, as the ledger integrity could not be maintained. All practices engaged by the blockchain nucleus to ensure survival, such as their forks and modifications of the core client, should thus be presumptively legal as far as antitrust enforcement is concerned. 1.2.2 ...but that! I recommend that antitrust agencies focus their enforcement activities on practices that affect the "real space", and on practices that defeat blockchain's purpose. As I discussed in Chapters 9 and I1, the first type of practice covers the use of blockchains to support firms' efforts to collude or monopolize markets. These practices have a strong and direct impact on consumers. Detecting this type of behavior will require proactive actions by antitrust agencies. If they engage in such actions, enforcement in the field will increase consumer welfare. The second category concerns practices that centralize blockchain eco-systems artificially. More specifically, agencies should target practices that centralize the infrastructure level of a blockchain. As I have explained, that level has a critical influence on the decentralization of other levels. Prohibiting artificial forms of centralization at that layer will free most of the ecosystem from coercive forms of power. In doing so, it will make blockchain a more potent ally to antitrust law. Furthermore, this type of enforcement will prove increasingly important over time. If blockchain adoption continues to increase, it could very well become a key infrastructure for the world economy. At that point in time, the artificial centralization of blockchain will become antitrust agencies' top enforcement priority. Overall, directing enforcement activities toward these two types of practices would free blockchain, and its economic ramifications, from the most restrictive practices without diminishing its usefulness or creating resentment within blockchain communities. Antitrust would thus become the ally of blockchain ecosystems and would start being perceived as such.

#### Antitrust oversight keeping blockchain open & decentralized is key to innovation

Massarotto 20 [Giovanna, Academic Fellow at the Center for Technology Innovation and Competition (CTIC) at UPenn, “Antitrust in the Blockchain Era,” *Notre Dame Journal on Emerging Technologies*, <https://ndlsjet.com/wp-content/uploads/2020/04/Antitrust-in-the-Blockchain-Era.pdf>, JCR]

Thus, someone might be led to question the future role of antitrust to tackle monopolizing conduct and regulate data. Although the main goal of antitrust law could be achieved through open and decentralized networks, such as public blockchains, antitrust enforcers still need to play a fundamental role as gatekeepers of the economic democracy in markets. As the Supreme Court recognized, the Sherman Act is the “Magna Carta of free enterprise”105 which needs to be enforced to be effective. The railroads and the Internet network created potential open platforms and infrastructures, which required an antitrust intervention to guarantee equal access to all market participants and prevent possible abusive practices.106 In order for open platforms to function, antitrust agencies are irreplaceable neutral bodies to oversee that no one engages in anticompetitive conduct to profit beyond that attainable in open and free markets. Standard Oil, 107 AT&T108 and more recently U.S. and EU Microsoft109 have shown that the temptation for companies that have the most to lose in a totally open market to engage in illegal anticompetitive behavior is often compelling.110 Antitrust agencies are responsible to ensure that there is a level playing field to compete in the evolution of existing technologies or the creation of new ones. Through the support of antitrust law, the largest companies can continue in the development of competitive technologies, creating alternative platforms or advancing the existing ones in open democratic (socially scalable) markets. As a football match needs both rules and referees, markets need rules and neutral bodies to oversee the compliance of those rules. Otherwise it is hard to tell who wins the competition or to even have a competition at all. Initially, markets based on the blockchain technology might not need a complex set of rules—an antitrust supervision and regulation might be sufficient. Greater forms of oversight might be desirable if such markets become increasingly high-traffic areas and a crucial component of our economic system.111 In a perfect world, self-regulation would be ideal.112 But as the financial crisis of 2008 revealed, specific forms of regulation are often necessary when antitrust alone is insufficient to regulate high-traffic industries.113 As one looks back on the Internet regulatory framework, it is true that the “Internet is the least regulated part of the telecommunications world today[,]”114 and it is also true that the fundamental compatibility rule is enforced.115 Although it is the least regulated, the Internet is still public in nature and governed by public rules enforced by public bodies.116 The following section explores some regulatory issues related to blockchain. Antitrust law originated in the United States as the first arm of government regulation117 on the booming oil market to limit the risks linked to the monopoly power of Standard Oil. Data represent the ‘new oil’ and instead of being traded in physical platforms (like the railroad) are being traded in online digital platforms based on the Internet. As a consequence, data have attracted even more and varied businesses, creating new, digital, online platforms. Such platforms based on the Internet network became increasingly high-traffic marketplaces and a crucial part of today’s economy, thereby requiring sophisticated regulations.118 Similar to the Internet through the Web, as above outlined, we might consider having a single universal blockchain that includes a variety of different markets. Blockchain markets built on a single universal blockchain infrastructure might become a fundamental component of our economy and require government intervention to regulate competition and possible legal issues. Markets require trust in order to attract business. The blockchain is not an exception to this fundamental economic principle. As learned from the past, self-regulation has often failed to maintain trust in markets from the Great Depression to the cryptocurrency crash of 2018. 119 Antitrust and effective forms of regulation are necessary to build—trust. 120 The blockchain technology is in its infancy and the creation of a universal public blockchain is merely an idea. At this moment, it might be difficult to elaborate specific forms of regulation for new markets that we cannot even envisage, but the Internet and the Web can certainly be used as a useful model of reference both to anticipate and to regulate a future single blockchain network. Similar to the Internet, government agencies might start theorizing rules to guarantee the compatibility in a public blockchain platform and prevent an uncontrolled centralization and private supervisory powers. Sir Tim Berners-Lee suggested the adoption of a Magna Carta or Bill of Rights for the Web to prevent Internet fragmentation into private networks and get everybody on the open and universal Web platform.121 Should we theorize a Magna Carta for the Blockchain to protect users’ rights related, for example, to their data? Perhaps, similar to the Web, we might start from setting some universal open standards to guaranty inter-operability of data122 and a socially scalable platform. The World Wide Web Consortium (W3C) set the open standards principles for the Web—open and free standards for a World Wide Blockchain might be defined in a similar fashion. The blockchain network, as well as the Internet platform, would certainly raise some specific legal and ethical issues, which cannot yet be envisaged. Thus, let us start from what we already know about the Web and the Internet regulations to anticipate and prevent some negative consequences that might also affect the creation of a single blockchain. Regulators are encouraged to envisage rules to protect ethical principles in blockchains123—for example, rules to prevent access by minors or people that might be interested in using a blockchain to commit crimes. This regulation may also cover the uncontrolled exchange or storage of sensitive information,124 or generally illegal and speculative activities. For example, the FBI expressed their concerns about the criminal exploitation of Bitcoins as the parties of bitcoin transactions are unknown.125 As with any tool, blockchain is not immune to abuses. Similar to the Internet, a public universal blockchain might need rules to guarantee non-discrimination among market players. A regulator may choose to adopt a net-neutrality regulation to prevent a paid prioritized blockchain in a single universal blockchain.126 In Europe and in part of the United States, net-neutrality or open internet regulation127 have allowed corporations of all sizes to act without the interference of the big Internet providers companies, creating a ‘neutral’ environment where every company can benefit from the same Internet speed and indiscriminately grow.128 Learning from the Internet, a paid prioritization blockchain network could generate a dual speed blockchain which would require one to pay for the benefits of a high speed blockchain or use a slower speed one for free.129 This duality might be prevented through the creation of developing technologies. The lightning network, for example, has the potential to make blockchain transactions faster and less expensive. It is based on a payment channel that is simple and fast in a decentralized manner. 130 Parties pay a fee only once and can transact back and forth without paying fees to miners. 131 With each transaction, parties sign a balance sheet confirming the new balance and when their transactions are completed, the parties pay to close the channel.132 The lightning network is a technology less developed than blockchain. However, it demonstrates along with the same blockchain ingenuity, how the creation and development of new technologies can provide more organic solutions which can be more ideal than regulation in certain circumstances. If we look back historically, regulation and guidelines are fundamental components in the prevention of forms of inequality, illegal activities, and the abuse of market power in free and open markets. Presently, there are basically no regulations to guide the growth and ensure an environment of trust among blockchain providers and users. Antitrust surveillance is the first step in preventing monopolies and forms of collusion among network participants in addition to overseeing markets until regulations are in place.133 Regulators and antitrust enforcers have a huge responsibility in the development of blockchain markets that we cannot fully envisage presently, although we know it very possibly might include the creation of a universal public blockchain. By its nature, the competitive market process looks for innovative and unanticipated solutions. As outlined above, antitrust, regulation, and innovation are not separate issues.134 The path of innovation largely depends on the action of both regulators and antitrust agencies, the results of which are unpredictable. The creation of a single universal blockchain where new markets run is feasible if such a blockchain can be kept free and open while subject to the supervision of regulatory bodies. History told us that individual market participants cannot be trusted to operate in the public interest in a total laissez-faire market. Markets rely on the trust of users. Market speculation, uncontrolled centralization and private supervisory powers can all promote a lack of trust rather than trust. In the context of antitrust, the likely shifting from closed-centralized platforms to open-decentralized networks, based on blockchain technology, is as compelling, critical, and revolutionary as the Internet has been over the past decades. Today antitrust agencies are concerned with a few powerful hi-tech companies which control most digital markets through their centralized platforms and databases.135 This economic scenario is likely to change soon, not by means of an antitrust intervention, but rather by decentralized networks based on blockchain technology. Antitrust enforcers then need to preserve both economic democracy and innovation to benefit consumers and the economy overall. Antitrust law should encourage competition to increase consumer welfare by improving, for example, social scalability and stimulate the growth of markets—no matter what the harm to a competitor, if the result of such conduct benefits consumers. Antitrust enforcers must endorse and oversee the process of the decentralization phenomena on behalf of free open markets and economic democracy. They will also be crucial in maintaining the delicate balance between over controlling the actions of large players and keeping them incentivized to lead the creation of new technologies.

### Plan – 1AC

#### Plan: The United States federal government should prohibit anti-competitive business practices by the private sector that artificially centralize public blockchain infrastructure

### Adv – Digital Security

#### Scenario 1 – AI

#### Centralized AI causes vulnerabilities that motivate attacks– 5G magnifies the risk unless we decentralize.

Malkiewicz 20 (Kylee Malkiewicz, Demand Generation manager at Dover, 8-4-2020, The Cybersecurity Risks of AI and 5G, Dover Microsystems, <https://info.dovermicrosystems.com/blog/cybersecurity-risks-ai-5g>) MAM

As 5G continues to roll out across the globe, it promises a hyperconnected world with fast downloads and low latency. These benefits of 5G in turn mean more complex systems—AI powered systems like smart cities and autonomous vehicles—are no longer the stuff of sci-fi fantasy, but technology that will be available to the average consumer in the near future.

Moving From Centralized To Distributed AI

AI has been around since 1955, just a decade after Von Neumann first described the stored-program architecture in 1945. The first proof of concept for what we know today as AI was created by scientists Allen Newell, Cliff Shaw, and Herbert Simon through their program, the Logic Theorist. This program allowed computers to mimic human problem-solving skills and strategies.

AI systems are highly complex, software-heavy applications, but they can be boiled down to a few basic components: an engine that processes data and sends commands, training data that provides data points for that engine to learn from, and the device that carries out the commands the engine creates.

For example, a Nest thermostat is able to set a user’s preferred temperature by analyzing and learning from the user’s behavior. Eventually, it is able to predict that the user likes to set the temperature 10 degrees cooler at night, and the AI engine will then send a command to the thermostat to lower the temperature at the same time every day.

Most of the AI applications that we have seen since the technology’s inception over 60 years ago have been Centralized AI. Centralized AI describes the scenario in which the engine that processes the data and sends a set of commands based on that data isn’t in the device it is commanding, but rather it is centralized on a dedicated server. In the case of the Nest thermostat, the data processing and command sending is not done by the thermostat itself, but by the Nest centralized cloud service that all Nest products and applications are connected to.

That all changes with 5G because 5G will enable Distributed AI (DAI). DAI isn’t a new concept, but 5G will support the adoption of DAI at a much higher rate than previous network generations because of its increased bandwidth or reduced latency.

Distributed AI Makes Systems Work Smarter, Not Harder

5G makes the proliferation of AI a reality because the network is allowing for the expansion of smart sensors. By 2025, 41.6 billion IoT devices are expected to be connected to the new network. From those devices, billions of sensors will provide contextual training data that DAI systems require to function.

Centralized AI uses standard training data to learn and requires millions of data points in order to function properly. Those millions of data points are stored in a centralized location, like a data cloud, which communicates back and forth between the AI devices.

The concept of DAI and the use of contextual training data—or data that is shared not from a centralized location but from one device to another—was first introduced by Google in 2017. Google presented the notion (which they dubbed Federated Learning) of a device downloading the training data, and then improving upon that data by learning from the data stored on the device. Then, the improved data is sent back to the cloud to update the original training data set.

With 5G and its ability to proliferate more connected devices, this method of constantly improving and sharing training data on a distributed platform leads to faster and better decision making. The savings of a couple seconds or even milliseconds might not seem to have the biggest impact, but when AI systems are making decisions in things like autonomous vehicles, quick and correct decisions are a matter of human safety.

Another benefit of DAI is that it won’t require as much data to work because it learns through interaction and communication with other systems. AI will still require a significant amount of data to process and learn from, but DAI means that it won’t require quite as much data as Centralized AI does.

Essentially, DAI gives more context to the data that the engine is processing through its interactions with the data on the device as well as other devices that are connected to the same network. Think of it like learning a new language through textbooks versus moving to the country where that language is spoken and having to interact with native speakers. You’re a lot more likely to learn the language better, and faster, than sitting in a classroom and conjugating verbs.

Complex & Vulnerable Software Requires Defense-In-Depth

The ability of 5G to support billions of connected devices has been touted as one of the greatest benefits of the next-gen network. The hyperconnected world of 5G will of course allow for complex applications and advanced systems, but it also creates an environment ripe for cyberattacks. As we’ve said before, with every new connected device that joins the network, a **new inlet for attack** is also created. For example, an attacker can exploit a software vulnerability on something as seemingly innocuous as a connected printer, to then gain access to the network and target more advanced systems. Let’s consider a smart factory has multiple complex systems, as well as simple, unassuming devices, all connected to the same 5G network. For the purposes of this example, we’ll pick an innocuous device like a printer in the back office of the factory. Let’s also say the application software running on that printer has a common vulnerability, like a buffer overflow. On the factory floor, a variety of systems connected to 5G are also in use, things like industrial sensors and self-driving forklifts. Because both the autonomous forklift and the printer are connected using the same network, an attacker could exploit the buffer overflow in the software on the printer to gain access to the network and seek out the autonomous forklift to do anything from denial of service to controlling it entirely. A seemingly harmless, but insecure, device like a printer can give an attacker the ability **to access any other device** on the network and wreak havoc. Whether that’s damaging **millions of dollars** [of] equipment or endangering the safety of the humans working in that smart factory. This is just one hypothetical situation that illustrates the need for robust, defense-in-depth cybersecurity. The same scenario described above, would not happen if the printer had been secured using each layer of the cybersecurity stack. For example, a printer with CoreGuard protecting it would have entire classes of software vulnerabilities, including buffer overflows, entirely protected against. The risks associated with 5G devices using AI applications are even more dangerous when we consider the fact that **the military is** likely to be **connecting to the same 5G network.** Then an insecure 5G network with insecure devices moves from being a cybersecurity risk to **an issue of national security.** AI-enabled devices using 5G have the potential to do everything from having Siri show us a nearby coffee shop faster, to making smart cities and fully self-driving cars the norm. But any revolutionary technology requires a revolutionary approach to protecting it.

#### Leads to devastating attacks on the financial sector

Cantos 19 [Michelle, Strategic Intelligence Analyst, former defense contractor and helped develop human-computer symbiosis programs for clients in the federal government, “Breaking the Bank: Weakness in Financial AI Applications,” 03/13/19, <https://www.fireeye.com/blog/threat-research/2019/03/breaking-the-bank-weakness-in-financial-ai-applications.html>, accessed 10/29/21, JCR]

Currently, threat actors possess limited access to the technology required to conduct disruptive operations against financial artificial intelligence (AI) systems and the risk of this targeting type remains low. However, there is a high risk of threat actors leveraging AI as part of disinformation campaigns to cause financial panic. As AI financial tools become more commonplace, adversarial methods to exploit these tools will also become more available, and operations targeting the financial industry will be increasingly likely in the future. Financial entities increasingly rely on AI-enabled applications to streamline daily operations, assess client risk, and detect insider trading. However, researchers have demonstrated how exploiting vulnerabilities in certain AI models can adversely affect the final performance of a system. Cyber threat actors can potentially leverage these weaknesses for financial disruption or economic gain in the future. Recent advances in adversarial AI research highlights the vulnerabilities in some AI techniques used by the financial sector. Data poisoning attacks, or manipulating a model's training data, can affect the end performance of a system by leading the model to generate inaccurate outputs or assessments. Manipulating the data used to train a model can be particularly powerful if it remains undetected, since "finished" models are often trusted implicitly. It should be noted that adversarial AI research demonstrates how anomalies in a model do not necessarily point users toward a wrong answer, but redirect users away from the more correct output. Additionally some cases of compromise require threat actors to obtain a copy of the model itself, through reverse engineering or compromising the machine learning pipeline of the target. The following are some vulnerabilities that assume this white-box knowledge of the models under attack: Classifiers are used for detection and identification, such as object recognition in driverless cars and malware detection in networks. Researchers have demonstrated how these classifiers can be susceptible to evasion, meaning objects can be misclassified due to inherent weaknesses in the mode (Figure 1). Researchers have highlighted how data poisoning can influence the outputs of AI recommendation systems. By changing reward pathways, adversaries can make a model suggest a suboptimal output such as reckless trades resulting in substantial financial losses. Additionally, groups have demonstrated a data-poisoning attack where attackers did not have control over how the training data was labeled. Natural language processing applications can analyze text and generate a basic understanding of the opinions expressed, also known as sentiment analysis. Recent papers highlight how users can input corrupt text training examples into sentiment analysis models to degrade the model's overall performance and guide it to misunderstand a body of text. Compromises can also occur when the threat actor has limited access and understanding of the model’s inner-workings. Researchers have demonstrated how open access to the prediction functions of a model as well as knowledge transfer can also facilitate compromise. AI can process large amounts of information very quickly, and financial institutions are adopting AI-enabled tools to make accurate risk assessments and streamline daily operations. As a result, threat actors likely view financial service AI tools as an attractive target to facilitate economic gain or financial instability (Figure 2). Branding and reputation are variables that help analysts plan future trade activity and examine potential risks associated with a business. News and online discussions offer a wealth of resources to examine public sentiment. AI techniques, such as natural language processing, can help analysts quickly identify public discussions referencing a business and examine the sentiment of these conversations to inform trades or help assess the risks associated with a firm. Threat actors can potentially insert fraudulent data that could generate erroneous analyses regarding a publicly traded firm. For example, threat actors could distribute false negative information about a company that could have adverse effects on a business' future trade activity or lead to a damaging risk assessment. Manipulating the data used to train a model can be particularly powerful if it remains undetected, since "finished" models are often trusted implicitly. FireEye assess with high confidence that there is a high risk of threat actors spreading false information that triggers AI enabled trading and causes financial panic. Additionally, threat actors can leverage AI techniques to generate manipulated multimedia or "deep fakes" to facilitate such disruption. False information can have considerable market-wide effects. Malicious actors have a history of distributing false information to facilitate financial instability. For example, in April 2013, the Syrian Electronic Army (SEA) compromised the Associated Press (AP) Twitter account and announced that the White House was attacked and President Obama sustained injuries. After the false information was posted, stock prices plummeted. Malicious actors distributed false messaging that triggered bank runs in Bulgaria and Kazakhstan in 2014. In two separate incidents, criminals sent emails, text messages, and social media posts suggesting bank deposits were not secure, causing customers to withdraw their savings en masse. Threat actors can use AI to create manipulated multimedia videos or "deep fakes" to spread false information about a firm or market-moving event. Threat actors can also use AI applications to replicate the voice of a company's leadership to conduct fraudulent trades for financial gain. We have observed one example where a manipulated video likely impacted the outcome of a political campaign. Several financial institutions are employing AI applications to select stocks for investment funds, or in the case of AI-based hedge funds, automatically conduct trades to maximize profits. Financial institutions can also leverage AI applications to help customize a client's trade portfolio. AI applications can analyze a client's previous trade activity and propose future trades analogous to those already found in a client's portfolio. Actors could influence recommendation systems to redirect a hedge fund toward irreversible bad trades, causing the company to lose money (e.g., flooding the market with trades that can confuse the recommendation system and cause the system to start trading in a way that damages the company). Moreover, many of the automated trading tools used by hedge funds operate without human supervision and conduct trade activity that directly affects the market. This lack of oversight could leave future automated applications more vulnerable to exploitation as there is no human in the loop to detect anomalous threat activity. We assess with moderate confidence that manipulating trade recommendation systems poses a moderate risk to AI-based portfolio managers. The diminished human involvement with trade recommendation systems coupled with the irreversibility of trade activity suggest that adverse recommendations could quickly escalate to a large-scale impact. Additionally, operators can influence recommendation systems without access to sophisticated AI technologies; instead, using knowledge of the market and mass trades to degrade the application's performance. We have previously observed malicious actors targeting trading platforms and exchanges, as well as compromising bank networks to conduct manipulated trades. Both state-sponsored and financially motivated actors have incentives to exploit automated trading tools to generate profit, destabilize markets, or weaken foreign currencies. Russian hackers reportedly leveraged Corkow malware to place $500M worth of trades at non-market rates, briefly destabilizing the dollar-ruble exchange rate in February 2015. Future criminal operations can leverage vulnerabilities in automatic training algorithms to disrupt the market with a flood of automated bad trades. Financial institutions and regulators are leveraging AI-enabled anomaly detection tools to ensure that traders are not engaging in illegal activity. These tools can examine trade activity, internal communications, and other employee data to ensure that workers are not capitalizing on advanced knowledge of the market to engage in fraud, theft, insider trading, or embezzlement. Sophisticated threat actors can exploit the weaknesses in classifiers to alter an AI-based detection tool and mischaracterize anomalous illegal activity as normal activity. Manipulating the model helps insider threats conduct criminal activity without fear of discovery. Currently threat actors possess limited access to the kind of technology required to evade these fraud detection systems, and therefore with high confidence we assess that the threat of this activity type remains low. However, as AI financial tools become more commonplace, adversarial methods to exploit these tools will also become more available and insider threats leveraging AI to evade detection will likely increase in the future.

#### Financial panic causes World War III – monetary measures that protected us after 2008 no longer work

Sundaram & Popov 19 [Jomo, a former economics professor, was United Nations Assistant Secretary-General for Economic Development, and received the Wassily Leontief Prize for Advancing the Frontiers of Economic Thought, Vladimir, Research Director at the Dialogue of Civilizations Research Institute in Berlin, “Economic Crisis Can Trigger World War,” 02/12/19, <http://www.ipsnews.net/2019/02/economic-crisis-can-trigger-world-war/>, JCR]

Economic recovery efforts since the 2008-2009 global financial crisis have mainly depended on unconventional monetary policies. As fears rise of yet another international financial crisis, there are growing concerns about the increased possibility of large-scale military conflict. More worryingly, in the current political landscape, prolonged economic crisis, combined with rising economic inequality, chauvinistic ethno-populism as well as aggressive jingoist rhetoric, including threats, could easily spin out of control and ‘morph’ into military conflict, and worse, world war. The 2008-2009 global financial crisis almost ‘bankrupted’ governments and caused systemic collapse. Policymakers managed to pull the world economy from the brink, but soon switched from counter-cyclical fiscal efforts to unconventional monetary measures, primarily ‘quantitative easing’ and very low, if not negative real interest rates. But while these monetary interventions averted realization of the worst fears at the time by turning the US economy around, they did little to address underlying economic weaknesses, largely due to the ascendance of finance in recent decades at the expense of the real economy. Since then, despite promising to do so, policymakers have not seriously pursued, let alone achieved, such needed reforms. Instead, ostensible structural reformers have taken advantage of the crisis to pursue largely irrelevant efforts to further ‘casualize’ labour markets. This lack of structural reform has meant that the unprecedented liquidity central banks injected into economies has not been well allocated to stimulate resurgence of the real economy. Instead, easy credit raised asset prices to levels even higher than those prevailing before 2008. US house prices are now 8% more than at the peak of the property bubble in 2006, while its price-to-earnings ratio in late 2018 was even higher than in 2008 and in 1929, when the Wall Street Crash precipitated the Great Depression. As monetary tightening checks asset price bubbles, another economic crisis — possibly more severe than the last, as the economy has become less responsive to such blunt monetary interventions — is considered likely. A decade of such unconventional monetary policies, with very low interest rates, has greatly depleted their ability to revive the economy. The implications beyond the economy of such developments and policy responses are already being seen. Prolonged economic distress has worsened public antipathy towards the culturally alien — not only abroad, but also within. Thus, another round of economic stress is deemed likely to foment unrest, conflict, even war as it is blamed on the foreign. International trade shrank by two-thirds within half a decade after the US passed the Smoot-Hawley Tariff Act in 1930, at the start of the Great Depression, ostensibly to protect American workers and farmers from foreign competition!

#### Decentralized blockchain prevents AI monopolization and drives AI innovation.

Karger et al. 21(Erik, Research Assistant and Ph.D. Student, Marvin Jagals, Research Assistant and Ph.D. Student, Frederik Ahlemann, chair for Information Systems and Strategic IT Management; all are at the University of Duisburg-Essen, Germany, 2021, Blockchain for AI Data – State of the Art and Open Research, Forthcoming Forty-Second International Conference on Information Systems, <https://www.researchgate.net/profile/Erik-Karger/publication/355174945_Blockchain_for_AI_Data_-_State_of_the_Art_and_Open_Research/links/61697bc8039ba2684441b860/Blockchain-for-AI-Data-State-of-the-Art-and-Open-Research.pdf>) MAM

Artificial intelligence (AI) and blockchain are currently trending terms that become increasingly present in people's everyday lives. Blockchain has been adopted for various other use cases since its first appearance as the Bitcoin’s underlying technology in 2008 (Nakamoto 2008). Blockchain allows the tamper-proof transfer of data or other assets without the involvement of an intermediate third party. As a new computational infrastructure**, blockchain has the potential to change many business, governance, and societal processes** (World Economic Forum 2018). AI is another technology that becomes increasingly influential for both research and practice. Self-learning algorithms are already part of many people’s everyday routines. AI drives many **aspects of modern society**. These aspects range from web searches to content filtering on social networks, to e-commerce website recommendations. This technology is also increasingly present in consumer products, such as cameras and smartphones (LeCun et al. 2015).

Next to the increased amount of available computing power that improved tremendously over the last years, data are another crucial driver behind the current growth and rise of AI systems. The reliability, security, trustworthiness, and credibility of the data sources or platforms from which data are collected and obtained are very relevant (Salah et al. 2019). If the data quality is poor, the quality of the AI models trained with these data suffers as well. Especially smaller companies may find it difficult to obtain sufficient data for training models. In contrast, large companies, such as Facebook and Google, usually find the acquisition or use of a large amount of data easy to implement. This centralization of data causes concerns about the possible **AI monopolization** by a few big companies (Dinh und Thai 2018). This could also negatively affect balanced competition between AI researchers and companies, eventually leading to a **slow down** in the development of AI (Dinh und Thai 2018). Furthermore, centralized data storage via clouds, data centers, and clusters might be obstructive for the development of highly secure and data protection-relevant AI applications. Particularly, centralized data storage is very vulnerable in terms of data protection and security when involving personal and sensitive data on users, locations, activities, or health records (Salah et al. 2019).

Given by its nature, the blockchain can tackle data quality and storage issues. For certain parties, blockchains natively already deliver **quality assurances** regarding the data stored on them: The employment of hashes to connect blocks prevents interfering with data (Cappiello et al. 2019). **Besides, blockchain's main benefit is decentralized trust.** The blockchain establishes a distributed chained data structure by using technologies such as smart contracts. These features enable blockchains to serve as a technical foundation for cryptocurrencies and as a system for data quality improvement and assurance (Wang et al. 2018; An et al. 2020). The blockchain has significant advantages for end users, as it can provide a secure and trusted shared ledger of data and transactions (Salah et al. 2019). The blockchain’s abilities might, therefore, **increase data creators' and owners’ motivation to share their data**. The users of AI systems can benefit directly from these data, as they **can be used as learning data** for the development of AI systems. This can help companies **generate more reliable AI** system results.

#### This is essential to secure AI from devastating attacks

Platz 20 [Brian, member of Forbes Technology Council, Co-CEO and Co-Chairman of Fluree, PBC, an open-source platform for data ecosystems, “Why We Shouldn't Have AI Without Blockchain,” 07/23/20, <https://www.forbes.com/sites/forbestechcouncil/2020/07/23/why-we-shouldnt-have-ai-without-blockchain/?sh=be795394c4eb>, accessed 10/29/21, JCR]

As AI continues to permeate the online world, it opens up a Pandora's box of unintended consequences. That’s because unleashing AI on the current version of the internet and letting it feed on potentially inauthentic data can lead to devastation. Our increasing reliance on machine learning opens the floodgates for hackers and other bad actors to manipulate data and exploit algorithms in dangerous ways. From entering counterfeit products into the supply chain to changing software source code to meddling with voter registration databases, data tampering is already being used as a powerful weapon. Introducing AI into the equation only amplifies the danger. AI is powerful enough to drive autonomous machines, and hackers are powerful enough to get past any firewall. Damage can be done in just a few seconds, and it could be months before anyone notices that something is off. To confidently support the expansion of AI as we move toward the next phase of the internet, the internet itself must adapt — with blockchain serving as the root of the change. The internet is already untrustworthy. Spurred on by game-changing events like the uncovering of AI-generated fake news and deep fake photos, internet users are being forced to rethink their faith in the internet as solely a force for good. Facebook’s Cambridge Analytica scandal and Equifax’s data breach exposed another one of the internet’s major problems: database vulnerability. Here, too, the public is beginning to turn against the internet. For evidence, look no further than the EU's General Data Protection Regulation (GDPR) or the California Consumer Privacy Act (CCPA) — two pieces of legislation both meant to place extreme limitations on the collection and storage of personal data. The underlying problem is that database security never caught up to the raw computer power that allows companies to collect and store more consumer data than ever thought possible. Instead of rethinking databases from the ground up to adjust to this new reality, the growing trend has been to introduce point fixes, further exacerbating the mess of APIs that have bogged down "modern" internet architecture. Yet it is the ability to gather and store data that drives the modern economy. Data is what enables companies to bring about the next generation of services custom-tailored to our preferences and needs. Web 3.0 ups the ante — and it needs a defense mechanism. It is possible to salvage the best of the internet while starting to solve some of its most pressing concerns. That’s because the internet is quickly moving into a new phase known as the Semantic Web, or Web 3.0. Web 3.0 aims to empower machines that are connected to the internet to communicate directly with each other — this is known as machine-to-machine (M2M) communication. Additionally, Web 3.0 will rely on AI to learn more about a user’s preferences from their past interactions, providing a richer and more personalized user experience. Search engines, for example, will be able to provide more accurate and intelligent results based on an individual’s habits and previous activities. On first blush, this may sound like an entrenchment of the problem: If we’re already concerned about our data, why move to a Web 3.0 model that depends on personal data even more? The answer is simple: It’s true that Web 3.0 will be data-driven, but it will no longer rely on centralized and insecure databases. Additionally, Web 3.0 has an essential tool in its toolkit that fundamentally changes the security profile of user data: blockchain. Blockchain can mitigate AI’s risks as a key part of Web 3.0. Blockchain provides the necessary technology to make sure that AI architects can understand and trace the path of machine learning, allowing them to be confident in the integrity of the data that powers AI. That’s because blockchain provides a tamper-proof public record, ensuring each individual piece of data’s end-to-end traceability. Using this digital audit trail, AI decisions and results become easily explainable. That explainability will become increasingly important as machine learning becomes more pervasive in online operations. With more deployments, there will be more adversarial attacks. Strong data integrity along with a provable history that can track the chain of updates over time will be absolutely critical to fighting against foul play. Perhaps one of the best things about blockchain protection is that a tamper-proof record not only helps identify suspicious cases of “data poisoning” in the past, but it also helps prevent them from happening in the future. On the blockchain, AI has access to data that is not only tamper-resistant and secure by design, but comes with a mathematical record that proves it has not been tampered with. This enables more open, decentralized, even permissionless environments, democratizing AI for all. The next generation of the AI-powered internet requires the next generation of defense mechanisms, and blockchain is the perfect match.

#### Scenario 2 – Internet of Things

#### Blockchain will revolutionize IoT security, but artificial centralization wrecks the benefits

Schrepel 21 [Thibault, Assoc Prof of Law at VU Amsterdam Univ, Faculty Affiliate at Stanford Univ CodeX Center, blockchain expert appointed to the World Economic Forum, *Blockchain + Antitrust: The Decentralization Formula*, p.269-70, JCR]

1.2.1 Blockchain and the Internet of Things. Technologies tend to accelerate each other," and for that reason, it is useful to analyze how they interact. Blockchain has direct implications for quantum computing, 3D printing, biotech and nanotechnologies, among others." In the subsequent developments, I will limit myself to discussing the loT and Al, as blockchains may serve as an infrastructure for these two technologies, there-fore shaping their use and developments. To put it simply, the loT is all about connecting the analog world to the digital one. Physical products are equipped with sensors or connectors that can send information or be controlled by online applications. There are over 20 billion loT devices in circulation today and this number will likely triple by 2025." Each of these devices generates information that is then turned into data, thus accelerating the already exponential production of data. In fact, the world is expected to produce six times as much data in 2025 as in 2019." Blockchains could boost loT. First, blockchains could be used as the infra-structure layer on top of which loT ecosystems are built. Second, blockchains, combined with algorithms, could help monitoring devices and spot anomalies. Should, for example, a product malfunction, blockchain ledgers could help identifying why—without permitting the constructor to tamper it. Third, smart contracts could allow loT devices to interact with each other on specified terms and ensure that they stick to them. Most of all, blockchain technology provides loT systems with security. By eliminating a single point of failure, blockchains ensure continuity even when a server is down. Not so surprisingly, 86 percent of blockchain adopters are combining the technology with loT solutions and this number will likely grow in the fidure.35 If blockchain technology does indeed become the infrastructure upon which most loT systems are built, it will be necessary to ensure that the technology's internal layers are free from economic coercion. If not, artificial forms of centralization will impact loT markets — for example, notably through anticompetitive practices that affect the validation of transactions or that raise prices. We can find a direct relationship between these external applications and blockchain's fourth and fifth layers.

#### Attacks on critical infrastructure on the rise. IoT attack would ripple across sectors.

Horwitz 21 [Lauren, senior content director at IoT Today, winner of the Silver Award from the American Society of Business Publican Editors, “IIoT Software Vulnerabilities Fuel Critical Infrastructure Attacks—Again,” 08/16/21, <https://www.iotworldtoday.com/2021/08/16/iiot-software-vulnerabilities-fuel-critical-infrastructure-attacks-again/>, accessed 10/21/21, JCR]

In August 2021, Forescout Research Labs and JFrog Security Research identified 14 vulnerabilities affecting the NicheStack TCP/IP stack, which the organizations dubbed INFRA:HALT. TCP/IP stacks enable vendors to implement basic network communications for IP-connected systems, including IT, operational technology (OT) and Industrial Internet of Things (IoT) devices. Indeed, NicheStack is present in myriad OT devices that are commonly used in several critical infrastructure sectors, such as manufacturing plants, water treatment, power generation and more. The new vulnerabilities enable remote code execution, denial of service, information leak, TCP spoofing, or DNS cache poisoning. Critical Infrastructure Attacks Reveal ICS Weak Spots The vulnerabilities discovered illuminate the risk to critical infrastructure systems should they be compromised by malicious actors. These systems are aging and vulnerable, said experts. “It is … an unfortunate example of the huge vulnerability of an aging infrastructure that has been connected, directly or indirectly, to the Internet,” said Curtis Simpson, CISO at Armis in a recent article on increasing attacks on critical infrastructure. Forrester Research’s Brian Kim said that critical infrastructure organizations need to focus on identifying vulnerable OT devices within their estate, then focus on building a zero-trust strategy, using least privilege and network segmentation to prevent malicious actors from gaining access to critical systems. “One of the best ways we can reduce the impact of a breach is a zero-trust strategy by limiting the communications of these ICS [industrial control systems],” Kime said.. “We can create an allow list that only allows communications with control systems that run a process–allowing least privilege for network connections … is a best practice. And ideally, we should have a barrier between IT and OT and segment each facility to have its own network. JFrog and Forescout research teams will present a webinar on August 19 to provide additional information about how these vulnerabilities were identified and how they can be mitigated. Critical Infrastructure Attacks on the Rise. Last year, there were some 65,000 ransomware attacks, according to the Recorded Future, a Boston-based cybersecurity firm. Cyberattacks on critical infrastructure present certain benefits from the attackers’ perspective, even if the objective of attackers is not a payout. First, malicious attackers can gain access to these vulnerable devices with ease, as OT devices may be older and lack the security protocols of newer technologies. Second, once critical operations are affected, it can grind operations to a halt. Affected organizations have great incentive to pay ransomware demands just r resume operations. “The nature of these vulnerabilities could lead to heightened risk and expose national critical infrastructure at a time when the industry is seeing an increase in OT attacks against global utilities, oil and gas pipeline operators as well as healthcare and the supply chain,” wrote Forescout Research Labs in an announcement regarding the vulnerabilities. Third, access to OT devices can always provide entrée to other systems within organizations. “Once accessed, the stack becomes a vulnerable entry point to spread infectious malware across IT networks,” the researchers continued. Kime noted that attacks like the recent one on Colonial Pipeline revealed that critical infrastructure systems are interconnected, creating the opportunity for ripple effects within these systems, then across the chain to IT systems as well. “An event like Colonial Pipeline has revealed that these are more systems of systems rather than independent, isolated sectors that operate within their own little world,” Kime said. Ultimately, Kime noted, critical infrastructure operators need to shift their perspective to enable more thoroughgoing protection of the critical infrastructure they manage. “There should be a strong focus among critical infrastructure on not just security but resilience,” he said.

#### Operational technology attacks are a unique terminal risk – economic and societal collapse.

Murphy 19 (Hannah Murphy, Tech Correspondent at Financial Times, 10-13-2019, Companies urged to bolster infrastructure cyber defences, Financial Times, <https://www.ft.com/content/797e1e5e-ca53-11e9-af46-b09e8bfe60c0>) MAM

Hackers have traditionally focused their attention on computer software, resulting in a mushrooming of cyber security companies that promise protections for office-based clients. But there is another, less well-known hacking threat: cyber attacks on big corporate operations, such as **manufacturing facilities or power plants, as well as other vital infrastructure.** Such attacks are becoming more commonplace, fuelling concerns that companies should ramp up their efforts to guard against them. This is no small challenge. For companies with operational technology — the computerised systems used to control industrial operations — the risks of a breach are plentiful; disruptions to machinery processes could dent revenues or cause an accident. For those involved in “critical infrastructure” — the **dams, energy, oil and gas facilities** required for society to function smoothly — the risks are more dramatic and may attract nation state hackers, not just those seeking financial gain. “Our economy will disappear, society will collapse — and these things are possible,” says Sujeet Shenoi, professor of computer science at the University of Tulsa, who has been involved in multiple government-led critical infrastructure projects. “**There’s never been a war** in human history **where** the **critical infrastructure hasn’t been damaged**.” He notes that some 80 per cent of critical infrastructure in the US is privately run. “These companies are not prepared for [a cyber attack]. You need extremely well trained people,” he says, noting the many former government experts are moving into the sector. Historically, critical infrastructure and operational technology were kept separate from the computer networks typically used in corporate headquarters. However, those worlds are now converging as outdated analogue systems have become increasingly digitised. “Systems that have been developed over 30 or 40 years are having the internet introduced to them,” says Casey Ellis, founder and chief technology officer at Bugcrowd, a cyber security group. But **retrofitting systems** that were never intended to be on the internet **creates new opportunities for hackers**, he says. “The attack surface is expanding rapidly.” As with normal IT systems, ransomware and malware can be used to infect operational technology and critical infrastructure. The most high-profile worm was the 2010 Stuxnet malware, which targeted Iran’s nuclear facilities. Operations at the food company Mondelez and drugmaker Merck were disrupted by the ransomware dubbed NotPetya in 2017. Ukraine has suffered a spate of attacks on its power grid system recently, and earlier this year, Norwegian aluminium maker Norsk Hydro had to freeze operations earlier after it fell victim to ransomware. While the marketplace for cyber security companies offering support to such groups is smaller than the traditional IT security space, experts caution that companies should take action. Moves might include assessing company **systems to ensure staff know what devices are connected to the network,** testing and monitoring those systems, and devising a plan for worst-case scenarios. Above all, companies should isolate the most critical systems to ensure they can keep them operating no matter what, says Pedro Abreu, chief product and strategy officer at online security company Forescout, who dubs the process “containing the blast area”. “If a WannaCry [attack] happens, I want to [be able to] shut down that facility or country” while the rest of the network remains running, he says. Various sectors are equipped differently, experts say. Where deep-pocketed energy, and oil and gas groups have been able to pour investment into bolstering their protections, others, such as the water sector, are thought to be lagging. To their advantage, Michael Fabian, principal consultant at Synopsys, notes that operational technology systems are “very restrictive”, meaning that “some expertise is needed to hack [them]”. By comparison, “**people providing consumer services have a massive attack surface**,” he says, citing the likes of Citibank, Target or Amazon. Nevertheless, operational technology systems have their own nuances. First, testing them for vulnerabilities can be difficult because the systems are too sensitive or essential to pause. “There are things that are ultra critical that we can’t put at risk by testing them, but we are doing just that — putting them at risk — by not testing them,” says Charles Henderson, global head of IBM’s hacking unit X-Force Red. This means cyber security companies may have to test for vulnerabilities against a less reliable reproduction of an actual system. And if a problem is uncovered, it is harder to fix. “The life cycles of those systems in the field is extraordinarily long,” says Eric Cornelius, chief product officer at BlackBerry Cylance, a cyber security group. Moreover, even if cyber security companies offer solutions, it can be many years before a system can be updated. For example, many companies would opt to rebuild an offshore gas plant once it has finally stopped running, rather than upgrade at great cost, Mr Cornelius says.

#### Goes nuclear

Vladimir Orlov 20, Founder & Director of the PIR Center, President of the Trialogue Club International, Head of the Center for Global Trends and International Organizations at the Diplomatic Academy, Ministry of Foreign Affairs of the Russian Federation, Co-Founder and Academic Supervisor of the International Dual Degree MA Program in Nonproliferation and Global Security Studies, MGIMO University, Professor at MGIMO University, author (or coauthor) of more than a dozen books and monographs and more than three hundred research papers, articles, and essays, publishes his views in Russian and foreign periodicals, “‘No Holds Barred’ and the New Vulnerability: Are We in for a Re-Run of the Cuban Missile Crisis in Cyberspace?,” SSRN Scholarly Paper, ID 3538078, Social Science Research Network, 02/14/2020, papers.ssrn.com, doi:10.2139/ssrn.3538078

Not hundred per cent of the dialogue has been frozen, fortunately. Certain informal, mostly offthe-record, meetings of US and Russian experts on cyber agenda continue taking place, both through Track 2 and Track 1.5. One of the most intellectually stimulating meetings, with frank exchanges, took place in Vienna in December 2018. The report produced after the meeting stressed “the significant risk […] that cyber-attacks could conceivably lead to a military escalation that may further trigger a nuclear weapons exchange, a fact that became more explicit with the adoption of the current Nuclear Posture Review. This issue gets complicated given that third parties may have the capabilities to invoke a cyber conflict between Russia and the United States. Whether a country or a non-state actor, they could put the two countries on the verge of an armed conflict by attacking critical infrastructure of either of them and making it look as if the aggressor were the other one”[22]. However, one should have no illusion: such informal meetings may be fully fruitful only when their reports and policy recommendations are utilized by the governments. And for that, a warmer climate in bilateral relations is a must. So far, we see exactly the opposite: mercury falling to freezing levels.

Risk of cyber clashes growing into a chaotic global cyber war has been emphasized by the UN Secretary-General Antonio Guterres in his Agenda for Disarmament: “Malicious acts in cyberspace are contributing to diminishing trust among States… States should implement the recommendations elaborated under the auspices of the General Assembly, which aim at building international confidence and greater responsibility in the use of cyberspace.[23]” However, as the members of the US-Russian Track 1.5 working group on strategic stability recently concluded, “without a constructive dialogue on cyber issues between the United States and Russia, the world would most likely fail to agree on any norms of responsible behavior of states in cyber space”[24].

Do we really have to survive a cyber equivalent of the Cuban Missile Crisis to realize the importance of achieving some kind of agreement on cyber issues, and on the broader agenda of international information security?[25] Or is that kind of talk plain old alarmism?

I don’t want to sound a fatalist, but I am even less keen on sounding like an ostrich that’s buried its head in the sand. We cannot ignore the obvious: whether the world’s most powerful actors like it or not, the world is sliding to another major crisis like the one in 1962. The cyber war is already raging. There are no rules of engagement in that war. The uncertainty is high. The spiral of tension is getting out of control. The cyber arms race is gaining momentum. And there are no guarantees that the next crisis will be controllable, or that it will result in a catharsis as far as international information security regulation is concerned. There’s no telling what will happen once the cyber genie is out of the bottle.

#### A collaborative environment for antitrust & blockchain creates the infrastructure upon which secure IoT and AI can thrive.

Schrepel 21 [Thibault, Assoc Prof of Law at VU Amsterdam Univ, Faculty Affiliate at Stanford Univ CodeX Center, blockchain expert appointed to the World Economic Forum, *Blockchain + Antitrust: The Decentralization Formula*, p.227-8, JCR]

In the third part of this book, I discuss how I think antitrust law should be enforced in the blockchain space. In order to do so without undermining block-chain ecosystems, a shift in legal and technical paradigms is necessary. This notably entails transforming mentalities, legal tools and competition policy. In fact, implementing a collaborative approach will become increasingly necessary. On the one hand, "the cyberspace is no longer some peripheral dimension. It increasingly has become the place where people organize themselves and define what happens in the real world."' On the other hand, the digital space is putting up a strong resistance to legal enforcement by constantly increasing the speed of activities. That resistance is particularly relevant when it comes to blockchain. If law and technology are at odds, both will fail to maximize social welfare. For that reason, West Coast code (pro-gramming) and East Coast code (laws and regulations) can no longer oppose each other; they must collaborate. Against this backdrop, I first detail what it takes to make blockchain and antitrust work together from a conceptual point of view (Chapter 13). I show that this raises unique challenges and offer a solution to them, using the full scope of the so-called "law is code" approach. Second, I discuss what needs to be done to ensure cooperation between blockchain and antitrust from a practical perspective (Chapter 14). To this end, I introduce a proactive agenda for regulating blockchain activities. As I explain, this approach would lead policymakers to establish comfort zones — that is, innovation hubs (allowing firms to raise questions and seek clarifications), regulatory sandboxes (testing grounds for businesses supervised by regulatory bodies) and safe harbors (similar to sandboxes, but with no limit in time or scale). They would also switch the focus of their enforcement activities on certain practices. I then discuss how blockchain can be used to support antitrust agencies' activities. I contend that regulators should use blockchain technology to make regulatory enforcement more horizontal, and 1 discuss the decentralization of decision-making mechanisms. In support of this, I explain what futarchy is and show how it could support authorities. If they collaborate, blockchain and antitrust can create a strong infrastructure upon which markets can thrive, including the Internet of Things and artificial intelligence.

# 2AC

### 2AC – T – Prohibitions

#### Restrictions on artificial centralization are prohibitions on anti-competitive business practices

Louven & Saive 18 [Sebastian & David, Research Associates at the Carl von Ossietzky Univ Oldenberg, Research Fellows at the Interdisciplinary Centre for Law of the Information Society, “Antitrust by Design – The Prohibition of Anti-Competitive Coordination and the Consensus Mechanism of the Blockchain,” *ZRI Working Paper*, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3259142>, accessed 10/05/21, JCR]

Basically, the competition authorities have legal powers to prohibit anti-competitive measures. Since the enforcement of any prohibition orders could be partially inadmissible for the reasons mentioned above, the question of effective antitrust enforcement also arises here. After all, prophylactic prevention of blockchain-based anti-competitive coordination by the competition authorities amounts to ex ante regulation, which is basically unfamiliar to European antitrust law. Although the antitrust law merger control contains a perspective to take prior to the measure in question on the basis of its prognostic assessment of the merger. However, this also refers to the effects to be expected after the merger and is limited after the clearance decision to a repressive control of possible remedial measures. Instead, entrepreneurial actions are not subject to approval. The above-mentioned block exemption regulations could provide legal certainty against the intervention of the competition authorities. Secondly, by means of public communications, the authorities could commit themselves in the exercise of their margin of judgement and discretion powers and show companies the possibilities under which conditions their behaviour in connection with blockchain technologies would be unobjectionable under antitrust law. Below the instrument of the exemption there is the possibility of a determination in accordance with Art. 5 para. 2 Regulation 1/2003 relating to individual cases that, subject to new findings, there is no reason for action by the authorities. Section 32c sentence 1 German law against restraints of competition (GWB) contains a corresponding declaratory provision for German antitrust law. The ban on concerted practices under antitrust law can be applied without further ado to blockchain situations. Traditional attribution concepts can be used for anticompetitive information exchange. As far as a current blockchain technology enables an extensive contact among the participating companies by means of its consensus mechanism, this is associated with a high risk, which can be countered by a compliance-sensitive design of the respective blockchain technology. This can also eliminate possible risks in the enforcement of official or judicial prohibition orders that could otherwise affect the entire operation of a blockchain. Just as the consensus mechanism can encourage a feeling, it could prevent it if it is properly designed.

1. **Prohibit can mean ‘severely hinder’---doesn’t necessitate a ban.**

**Washington Court of Appeals 19** (KORSMO-judge. Opinion in State v. Kimball, No. 35441-5-III (Wash. Ct. App. Apr. 2, 2019). Google scholar caselaw. Date accessed 7/13/21).

His argument runs counter to the meaning of the word "prohibit." It means "1. To forbid by law. 2. To prevent, preclude, or severely hinder." BLACK'S LAW DICTIONARY 1405 (10th ed. 2014). As **"severely hinder"** suggests, a "prohibition" **need not be** an all or nothing proposition.

### 2AC – Cap

#### There’s a timeframe net benefit – current tech and market incentives are key to create the transition to socialism.

Aronoff & Denvir 21 [Kate, staff writer at the New Republic, writing fellow at In These Times, Daniel, visiting fellow in International and Public Affairs at Brown Univ, “Capitalism Can’t Fix the Climate Crisis,” *Jacobin*, 08/25/21, <https://jacobinmag.com/2021/08/capitalism-climate-crisis-global-green-new-deal-clean-energy-fossil-fuel-industry>, accessed 08/26/21, JCR]

DD: You write: “My argument in this book is not that capitalism has to end before the world can deal with the climate crisis. Dismantling a centuries-old system of production and distribution, and building a carbon-neutral and worker-owned alternative, is almost certainly not going to happen within the small window of time the world has to avert runaway disaster. The private sector will be a major part of the transition off of fossil fuels. Some people will get rich, and some unseemly actors will be involved. Capitalist production will build solar panels, wind turbines, and electric trains. But whether we deal with climate change or not can’t be held hostage to executives’ ability to turn a profit. To handle this crisis, capitalism will have to be replaced as society’s operating system, setting out goals other than the boundless accumulation of private wealth.” This argument provoked a bit of controversy in the audience a few years back in Chicago when we discussed it on a panel at the Socialism Conference. Both of us would love to live in a socialist world, and we’ve got to continue to fight for one. But why do you think that it’s important for people to understand that we need to deal with climate change before we win an entirely new mode of production? What’s entailed by the conclusion that we need to pursue radical social-democratic reforms on the road to socialism? Is this a theory of how radical social-democratic reforms can lead to socialism? Is it just a reality that the fast-ticking climate clock imposes on us? Or is it some of both? KA: It’s a reality. If the climate crisis were playing out over the course of two hundred, three hundred, or a thousand years, one could have an interesting theoretical debate about whether we should change the system we have and tweak it slightly in order to take on the crisis, or whether we should create an entirely new mode of production and build up a workaround alternative. Unfortunately, we just don’t have that time. The Intergovernmental Panel on Climate Change [IPCC] outlined in its 2018 report on 1.5 degrees Celsius that we had roughly twelve years. That is now nine years in which to rapidly decarbonize the global economy, which is an enormous challenge. In order to meet that ever-shrinking twelve-year window, we have to use the productive system in which we live — which is not my ideal situation, but then again, neither is global warming.

#### Well-regulated capitalism is possible, sustainable, and solves every existential threat – alternatives sacrifice millions to irreversible poverty.

Budolfson 21 (Mark Budolfson, Assistant Professor in the Department of Environmental and Occupational Health and Justice at the Rutgers School for Public Health and Center for Population–Level Bioethics., 5-7-2021, Arguments for Well-Regulated Capitalism, and Implications for Global Ethics, Food, Environment, Climate Change, and Beyond, Cambridge Core, <https://www.cambridge.org/core/journals/ethics-and-international-affairs/article/arguments-for-wellregulated-capitalism-and-implications-for-global-ethics-food-environment-climate-change-and-beyond/96F422D04E171EECDEF77312266AE9DD>) MAM

The Argument for Well-Regulated Capitalism

However, things are more complicated than the arguments above would suggest, and the benefits of capitalism, especially for the world's poorest and most vulnerable people, are in fact myriad and significant. In addition, as we will see in this section, many experts argue that **capitalism is not the fundamental cause** of the previously described problems but rather **an essential component of the best solutions** to them and of the best methods for promoting our goals of health, well-being, and justice.

To see where the defenders of capitalism are coming from, consider an analogy involving a response to a pandemic: if a country administered a rushed and untested vaccine to its population that ended up killing people, we would not say that vaccines were the problem. Instead, the problem would be the flawed and sloppy policies of vaccine implementation. Vaccines might easily remain absolutely essential to the correct response to such a pandemic and could also be essential to promoting health and flourishing, more generally.

The argument is similar with capitalism according to the leading mainstream arguments in favor of it: Capitalism is an essential part of the best society we could have, just like vaccines are an essential part of the best response to a pandemic such as COVID-19. But of course both capitalism and vaccines can be implemented poorly, and can even do harm, especially when combined with other incorrect policy decisions. But **that does not mean** that **we** should **turn against them**—quite the opposite. **Instead, we should embrace them as essential** to the best and most just outcomes for society, and educate ourselves and others on their importance and on how they must be properly designed and implemented with other policies in order to best help us all. In fact, the argument in favor of capitalism is even more dramatic because it claims that much more is at stake than even what is at stake in response to a global pandemic—what is at stake with capitalism is nothing less than whether the world's poorest and most vulnerable billion people **will remain in conditions of poverty and oppression, or** if they will instead finally **gain access to** what is minimally necessary for **basic health and wellbeing** and become increasingly affluent and empowered. The argument in favor of capitalism proceeds as follows:

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:

**optimally 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.

### 2AC – Private Enforcement

#### Only private, class action litigation deters --- overwhelming empirical and statistical evidence.

Lande ’16 [Robert; Spring 2016; Venable Professor of Law at the University of Baltimore School of Law, Director of the American Antitrust Institute; Antitrust, “Class Warfare: Why Antitrust Class Actions Are Essential for Compensation and Deterrence,” vol. 30]

Our recent empirical studies demonstrate five reasons why antitrust class action cases are essential: (1) class actions are virtually the only way for most victims of antitrust violations to receive compensation; (2) most successful class actions involve collusion that was anticompetitive; (3) class victims’ compensation has been modest, generally less than their damages; (4) class actions deter significant amounts of collusion and other anticompetitive behavior; and (5) anticompetitive collusion is underdeterred, a problem that would be exacerbated without class actions.

Recent court decisions undermine class action cases, thus preventing much effective and important antitrust enforcement.1

Class Actions Are Virtually the Only Way for Most Victims of Federal Antitrust Violations to Receive Compensation

The antitrust statutes provide that violations result in automatic treble damages for the victims.2 The legislative history 3 and case law indicate that compensation of victims is a goal, perhaps the dominant goal, of antitrust law’s damages remedy.4 Class actions play an essential role in ensuring that the treble damages remedy serves its intended function of “protecting consumers from overcharges resulting from price fixing.”5 As the Supreme Court noted, “[C]lass actions . . . may enhance the ef ficacy of private [antitrust] actions by permitting citizens to combine their limited resources to achieve a more powerful litigation posture.”6 Accordingly, “courts have repeatedly found antitrust claims to be particularly well suited for class actions . . . .”7

Without class actions, cartels and other antitrust violators that inflict widespread economic harm would have little to fear from the treble damages remedy. This is because, as a practical matter, class action cases are virtually the only way for most victims of anticompetitive behavior to receive compensation.8 A 2013 study that Professor Joshua Davis and I conducted documents the benefits of private enforcement by analyzing 60 of the largest recent successful private U.S. antitrust cases (defined as suits resolved since 1990 that recovered at least $50 million in cash for the victims9 ). These actions returned a total of $33.8–$35.8 billion in cash to victims of anticompetitive behavior.10 These figures do not include products, discounts, coupons, or the value of injunctive relief or precedent—only cash.11 Consequently, these totals significantly understate the actual benefits of this litigation to the victims involved. And, of course, this study covered only 60 suits (albeit 60 of the largest private recoveries) out of the many hundreds of private cases filed in the United States during this period.

Of these 60 large private cases, 49 were class action suits.12 These cases recovered a total of $19.4–$21.0 billion—the majority of the amount analyzed in our study.13 Since these were among the largest private actions ever filed, specific conclusions based upon these results may not generalize perfectly to all class action cases. They do suggest, however, that without class action cases, effective and significant victim compensation would be reduced dramatically.

Most Successful Class Actions Involve Collusion that Was Anticompetitive

Almost every private antitrust case that results in a remedy does so through a settlement,14 so the underlying merits of the plaintiffs’ claims usually have not been definitively assessed by a court or jury. Critics sometimes use this fact to support assertions that class actions usually are meritless, that plaintiffs often receive huge sums from cases not involving anticompetitive conduct, and that private antitrust actions often amount to legalized blackmail or extortion.15

Antitrust class actions arise in widely varied market and factual settings, and views about the merits of specific cases and the litigation risks involved vary as well. This makes it extremely difficult to draw objective conclusions about the merits of settlements.

Nevertheless, there are good reasons to believe that the vast majority of class action cases in the Davis/Lande study involved legitimate claims. Forty-one of the 49 class actions involved allegations of collusion,16 and the same conduct supporting the settlements gave rise to criminal penalties in 20 cases; to civil relief by the FTC or DOJ in 8 cases; to civil relief by a state or other governmental unit in 9 cases; to a trial that the defendants lost and that was not overturned on appeal in 7 cases; to a class being certified in 22 cases; and to plaintiffs surviving or prevailing at summary judgment in 12 cases.17 Overall, 44 of the 49 class action suits (90 percent) exhibited at least one of these forms of legal validation as to their merits. (The 5 actions that did not have at least one of these indicia settled too early for a substantive evaluation of their merits).18

These results are broadly consistent with a finding that Professor John Connor derived from an analysis of 130 private recoveries worldwide in international cartel cases for which he could obtain the necessary data.19 He found that of the 50 largest worldwide settlements, measured by their monetary recoveries in constant dollars, 49 had been filed against international cartels.20 Of these, 51 percent were follow-ups to successful DOJ prosecutions, and another 8 percent were filed after fines by the EC or other non-U.S. antitrust authorities.21 Using a different data set, Connor and I found that 36 of 71 (also 51 percent) successful U.S. class action recoveries followed successful DOJ criminal cases.22

This data does not prove that these or any other specific class action cases involved anticompetitive conduct. But critics who assert that most antitrust class actions are little more than legalized blackmail rely only on anecdotes, hypotheticals, and opinions (often of defendants in the cases), without support from studies, and with no reliable empirical evidence that the actions lack merit or that settlement amounts are excessive compared to the anticompetitive harm.23 To be fair, one should compare the above indicia of validity to the absence of any systematic evidence underpinning the critics’ charges.

#### Overdeterrence is fake news – zero empirical cases. Treble damages key to deterrence

Lande ’16 [Robert; Spring 2016; Venable Professor of Law at the University of Baltimore School of Law, Director of the American Antitrust Institute; Antitrust, “Class Warfare: Why Antitrust Class Actions Are Essential for Compensation and Deterrence,” vol. 30]

Anticompetitive Collusion Is Underdeterred, A Problem that Would Be Exacerbated Without Class Actions

Some critics assert that “treble damages, along with other remedies, can overdeter some conduct that may not be anticompetitive . . . .”43 Yet, despite the request by the Antitrust Modernization Commission for evidence on this issue,44 “[n]o actual cases or evidence of systematic overdeterrence were presented to the Commission . . . .”45

By contrast, in a recent study, John Connor and I analyzed whether the current level of antitrust enforcement against cartels (the source of most class action cases) was optimal in achieving deterrence.46 The United States imposes a diverse array of sanctions against collusion: criminal fines and restitution payments for firms, and prison terms, house arrest, and fines for corporate officials. Both direct and indirect victims can sue for mandatory treble damages and attorneys’ fees. This multiplicity of sanctions has helped give rise to the strongly held—but until recently never seriously examined— conventional wisdom in the antitrust field that these sanctions are not merely adequate, but are probably excessive.47

Our study analyzed this issue using the standard optimal deterrence methodology.48 This approach is predicated upon the belief that corporations and individuals contemplating illegal collusion will be deterred only if expected rewards are less than expected costs, adjusted by the probability the illegal activity will be detected and sanctioned.49 The study first calculated the expected rewards from cartelization using a unique data base containing information concerning 75 cartel cases. The study surveyed the literature to ascertain the probability that cartels are detected and the probability that detected cartels are sanctioned, and calculated the size of the sanctions involved for each case. These sanctions include corporate fines, individual fines, payouts in private damage actions, and the equivalent value (or disvalue) of imprisonment or house arrest for convicted individuals (using $6 million per year).50

The analysis showed that, overall, combined U.S. cartel sanctions are only 9 to 21 percent as large as they should be to deter anticompetitive collusion optimally.

This means that despite the existing sanctions, collusion remains a rational business strategy, and that cartelization is a crime that, on average, pays. In fact, it pays very well. Cartel underdeterrence is a severe problem today, and without class action cases the extent of this underdeterrence would be substantially worse.51

Conclusion

There is an almost-unanimous consensus in the antitrust world that the DOJ’s anti-cartel enforcement record is exemplary.52 In terms of benefits generated, taxpayer dollars are well spent.

Antitrust class action cases, in contrast, get little respect and much criticism, with critics asserting that antitrust class actions are usually not in the public interest.53 This critical view may help explain the large number of judicial decisions that have made it more difficult for victims of anticompetitive conduct, and especially those victims with limited resources, to recover significant portions of their overcharges and, at times, have prevented any recovery whatsoever.54 In light of the crucial role that antitrust class action recoveries play in compensating victims of illegal activity and deterring anticompetitive behavior, these cases should be encouraged rather than hampered through restrictive judicial interpretations of the applicable law.

#### Privates solve through detection and deterrence---AND is modeled by the E.U.

Davis ’17 [Joshua and Robert Lande; 2017; Professor and Director of Center for Law and Ethics at the University of San Francisco; Venerable Professor of Law at the University of Baltimore, M.P.P. and J.D. from Harvard University; Scholar Works, “Restoring the Legitimacy of Private Antitrust Enforcement,” Ch. 6]

III. Specific Recommendations

A. Competition Advocacy

The next administration should restore balance to the DOJ and FTC’s competition advocacy and amicus programs by educating the public and the courts about the virtues of vigorous private antitrust enforcement and by dispelling the myths about widespread abusive antitrust litigation. The administration should also support efforts by the courts to strengthen their use of case management tools to reduce the expense of litigation.

The administration should actively support efforts by the European Union and other foreign jurisdictions to develop effective private rights of action. The United States has a strong interest in ensuring that international cartels are adequately deterred, and private enforcement in the U.S. and abroad is an essential component of that deterrence.

B. Twiqbal Reform

The Supreme Court’s ruling in Bell Atlantic Corp. v. Twombly 74 suggested that a heightened standard applied in pleading an antitrust conspiracy, at least in proposed class actions. Ashcroft v. Iqbal75 made clear that the new pleading standard applies to all cases, although it did not make similarly clear what the new standard is. Together these cases have come to be known as “Twiqbal.” Twiqbal has been criticized as destabilizing federal civil litigation without adequate consideration and forethought.76 It also relies on a questionable assumption that plaintiffs successfully pursue frivolous litigation with some regularity77—questionable, in particular, when it comes to private antitrust cases.78 One unanticipated consequence of Twiqbal was the rise of a body of literature attempting empirical analyses of its effects. There is some evidence that Twiqbal decreased the rate at which plaintiffs’ claims survive motions to dismiss.79 But it is hard to disentangle that simple conclusion from other dynamics at play, including determining whether the decision changed the cases that plaintiffs bring—perhaps they bring fewer—and whether it altered the behavior of potential defendants—perhaps they violate plaintiffs’ legal rights more often.80 Indeed, the flurry of empirical research on Twiqbal may reveal not only the limits on how current scholars conduct empirical analyses but on the limits on what those analyses can tell us about the civil litigation system.81 Still, at least two conclusions seem plausible: first, Twiqbal made it at least somewhat more difficult for plaintiffs to bring cases and, second, it did so without an adequate basis. The next administration should work to prevent this sort of groundless curtailment of antitrust enforcement.

C. Prejudgment Interest

The next administration should introduce legislation to amend section 4 of the Clayton Act to provide for an automatic award of prejudgment interest to prevailing plaintiffs, starting from the time the injury first occurs.82 As Judge Easterbrook has noted, “The denial of prejudgment interest systematically undercompensates victims and underdeters putative offenders. We should allow, indeed require, such awards.”83 Given the typical lag time between the injury inflicted by an antitrust offense and the judgment or settlement, and under conservative assumptions about the time value of money, the failure to award prejudgment interest typically reduces a plaintiff’s recovery by at least one-third.84 Moreover, the absence of prejudgment interest gives defendants a strong incentive to delay the resolution of litigation.85 Nor does the award of treble damages under federal antitrust law compensate adequately for the lack of prejudgment interest.

Some argue that no change should be made in the current law because treble damages adequately compensate “for the general unavailability of prejudgment interest in antitrust cases.”86 This is plainly incorrect. As Judge Easterbrook has pointed out, “[Trebling makes up for the fact that antitrust violations are hard to detect and prove.”87 A diverse group of scholars believe, for example, that no more than 25% of cartels are detected and proven.88 This factor alone suggests that treble damages might not be adequate to deter violations optimally – even if the damages included prejudgment interest and even if treble damages usually were awarded. Trebling also makes up for the fact that actual damages do not compensate for harms from market power as allocative efficiency losses and “umbrella” effects.89 If due to these factors, as some scholars persuasively argue, treble damages actually approximate single real damages,90 and in light of the fact that even cartels seldom pay even nominal single damages,91 then prejudgment interest becomes an important way for the antitrust system to deter anticompetitive conduct.

D. Daubert Reform

Before the Supreme Court’s decision in Daubert v. Merrell Dow Pharm., Inc.,92 “admissibility challenges to the qualifications and methodologies of economic testimony in antitrust cases were rare.”93 In recent years motions to exclude expert economic testimony in antitrust cases under Daubert and Federal Rule of Evidence 702 are the rule rather than the exception. Because expert testimony typically is essential for plaintiffs to establish the elements of their case (e.g., market definition), and a successful Daubert motion will usually lead to summary judgment for the defendants (while exclusion of defendants’ expert will not be dispositive), “Daubert motions are almost exclusively defense tools used to attack plaintiff’s case.”94 One review of federal appeals court decisions involving Daubert between 2000 and 2006 shows that the admissibility rate of economists and accountants in those cases was .598.95 However, for the antitrust cases in the sample (11 of 87 cases), the admissibility rate was only .272, and all of the antitrust cases involved challenges to the plaintiffs’ experts.96

Another study found that out of 412 Daubert challenges the authors were able to identify between 2000 and 2008 through the Daubert Tracker Website,97 73 occurred in antitrust cases—in other words, 18% of the challenges arose in antitrust cases, even though antitrust accounted for only 0.8% of cases filed during that period.98 Using a larger dataset, the authors analyzed a total of 113 challenges in antitrust cases from 2000 through 2011.99 21 of those challenges were against defense experts and 92 against plaintiffs’ experts. The challenges of defense experts succeeded at a rate of 29% and the challenges of plaintiffs’ experts succeeded at a rate of 41%. Moreover, the courts exclude none of the testimony of the defense experts in its entirety whereas they excluded 23% of the plaintiffs’ experts’ testimony in its entirety.

The asymmetric application of Daubert leads to adverse consequences. First, it raises plaintiffs’ litigation costs, often unnecessarily, because most Daubert motions are denied.100 Not only do plaintiffs have to incur additional lawyers’ time to defend against the inevitable Daubert motion, they have to spend more on experts, perhaps at an early stage, to ensure that expert reports withstand challenge. And it may be more difficult and expensive for plaintiffs to obtain qualified experts to testify than for defendants to do so because economists fear that they will “Dauberted” if they take on a case for plaintiffs, and their future employment prospects as an expert will be diminished. Indeed, rather than being used merely to exclude “junk economics,” there is evidence that Daubert has sometimes been used to dismiss cases where the court has essentially disagreed with the expert’s analysis, thus stigmatizing the economist and usurping the role of the jury.101

Footnote 101:

101 See Gavil & Funk, supra note 85, at 588 (“There is . . . some evidence of some aggressive use by judges of their gatekeeper function, sometimes without the safeguards that Daubert itself mandated.”). Some very well known economists have had their testimony for plaintiffs excluded on Daubert grounds, including Nobel Laureate Robert Lucas in In re Brand Name Prescription Drugs Antitrust Litig., 186 F.3d 781 (7th Cir. 1999), Professor Robert Hall of Stanford University in Concord Boat Corp. v. Brunswick Corp., 207 F.3d 1039 (8th Cir. 2000), and Professor Franklin Fisher of MIT in Williamson Oil Co. v. Philip Morris USA, 346 F.3d 1287 (11th Cir. 2003).

End of Footnote 101.

Particularly troubling is the recent trend of courts to apply Daubert at class certification. The Supreme Court has noted this issue in dicta without resolving it.102 Lower courts have conflicting views.103 Daubert would seem to be an awkward fit at class certification. First, the primary concern animating Daubert appears to have been the capability of a jury to assess scientific testimony.104 But the judge, not the jury, decides class certification. There is no need to worry that “befuddled juries will be confounded by absurd and irrational pseudoscientific assertions.”105 Second, the Supreme Court has made clear that a court must assess expert testimony at class certification, to the extent it is relevant to the class certification standard.106 Any concerns about the reliability of the expert testimony would naturally be a part of that assessment. Defendants can raise those concerns in opposing class certification. There is no need for an additional round of briefing on the admissibility of expert testimony. Separate Daubert briefing adds unnecessarily to the cost of class litigation and to the burden on the courts. It also gives a strategic opportunity to defendants, who generally get two additional briefs (an opening brief and a reply on Daubert) to plaintiffs’ one (an opposition) and often get the last word on class certification even though the burden lies with plaintiffs to satisfy Rule 23. Plaintiffs can of course counter by filing their own Daubert motions, but that just further increases the cost and burden of litigation. It would be better to require defendants to include any concerns they have about plaintiffs’ expert testimony in their briefs opposing class certification.

Preventing the misuse of Daubert should be of concern to the government, not only as a guardian of effective private enforcement, but also as a litigant in the federal courts and administrative proceedings.107 The DOJ and FTC should hold a joint workshop and issue a report detailing the effects of Daubert on private and public litigation. As part of that effort, the agencies should consider drafting guidelines for use by the federal courts in evaluating the reliability of economic testimony with respect to certain recurring issues, including market definition, market power, and conspiracy.108 The agencies should consider methods of discouraging wholesale Daubert challenges, including encouraging the use of Rule 11 sanctions for frivolous Daubert motions. Finally, the agencies should consider intervening as an amicus in appropriate cases to establish standards that would limit the misuse of Daubert.

Footnote 108:

108 Such a guide might be adopted by the Federal Judicial Center for inclusion in its Reference Manual on Scientific Evidence, which contains, for example, a chapter on estimating economic losses in damages awards, including antitrust damages.

End of Footnote 108.

E. Class Action Waivers in Arbitration and Illinois Brick Reform

In American Express Co. v. Italian Colors Restaurant, the Supreme Court made it very difficult to challenge pre-dispute arbitration provisions that bar class actions.109 Few court will be able to set aside such provisions in the future. As a result, class action waivers in effect immunize many potential violators from private purchaser actions.110 Allowing waiver of class treatment is a particularly concerning in antitrust because of the Illinois Brick rule; as Professor Gilles notes, “The only people who can bring an antitrust class action in federal court [direct purchasers] are those on whom collective action waivers may most easily and directly be imposed.”111

Meanwhile, the controversy over indirect purchaser damage suits under federal law has raged for almost 40 years. Since the Supreme Court’s decision in Illinois Brick, indirect purchasers have been unable to recover damages under section 4 of the Clayton Act,112 while direct purchasers can recover the full amount of an overcharge under Hanover Shoe without allowing for any pass-on defense.113 Italian Colors creates new urgency to reconsider Illinois Brick so that private lawsuits can help deter antitrust violations. Private antitrust suits arguably have done more to discourage law-breaking than criminal enforcement by the DOJ.114 Given the essential role that class actions play in private antitrust enforcement,115 the combined effect of Italian Colors and Illinois Brick may be to decrease significantly the efficacy of U.S. antitrust laws.116

The next administration should work to overrule Italian Colors. But given the current political situation, that may not prove feasible. Instead, or in addition, the next best solution may be to reform Illinois Brick. If so, here are some principles to guide that challenging effort: (1) historical levels of antitrust deterrence should not be undermined; (2) consumers should be compensated for their harm to the extent practicable; (3) the calculation of potential damages to any class of purchasers should be reasonably predictable so as to provide clear incentives for private lawyers to take on cases; (4) administrative costs should be minimized to the extent this would not interfere with any of the other goals in this area; (5) procedural hurdles, particularly in the class certification process, should not undermine the effectiveness of direct or indirect purchaser actions; and (6) state attorneys general should retain the option of bringing parens patriae actions under state law in state court, without removal.117

F. Class Certification Standard

The Supreme Court has issued several recent opinions pertaining to the standard at class certification. Some of them threatened to undermine class actions and, with them, the efficacy of private antitrust enforcement.118 The upshot, however, is that the class certification standard has been clarified but not for the most part made more exacting. Wal-Mart Stores, Inc. v. Dukes119 held that courts may consider the merits of a class action to the extent they are relevant to determining whether plaintiffs have carried their burden to certify a class under Rule 23. Amgen Inc. v. Conn. Ret. Plans & Trust Funds120 clarified that the inquiry to into the merits is permissible “only to the extent” it bears on the Rule 23 standard121 and confirmed that the Rule 23 “grants no license to engage in free-ranging merits inquiries at the class certification stage.”122 Comcast Corp. v. Behrend123 held that plaintiffs’ theory of liability much match their theory regarding damages.124 Each of these decisions could have dealt a serious blow to antitrust class actions. In the end, none did. Yet, as in the past, the class action standard remains under siege.

One ominous case on the horizon is Bouaphakeo v. Tyson Foods. The Supreme Court has taken up the question of whether a class may be certified under Rule 23(b)(3) if it includes “members who were not injured and have no legal right to any damages.”125 AAI successfully briefed this issue in In re Nexium Antitrust Litigation, in which the First Circuit recognized that “objections to certifying a class including uninjured members run counter to fundamental class action policies.”126 Including uninjured members in a class need not increase a defendant’s damages and does not raise due process issues, particularly not ones a defendant should have standing to raise.127 Indeed, awarding class wide damages in an antitrust case—including for a class that includes uninjured members—can minimize error costs, providing a more accurate measure of damages than would individual litigation.128

In the upcoming Term, the Court will also consider whether defendants can defeat class actions by “picking off” the proposed class representatives with an offer of complete relief for the representative’s individual claim, even when the offer to settle is rejected. Campbell-Ewald Co. v. Gomez.129 Specifically, the Court will consider whether a class representative’s claim is mooted by an offer of complete individual relief before the class is certified, an issue left open in Genesis Healthcare Corp. v. Symczyk.130 For the reasons stated in Justice Kagan’s dissent for four justices in Genesis Healthcare, an unaccepted offer is a legal nullity that should not moot a class representative’s claim, let alone the claims of the class.

The Supreme Court does not pose the only threat to class actions. Some lower courts have created a demanding “ascertainability” requirement not found in Rule 23. They have held not only that plaintiffs must offer a class definition based on objective criteria, but that an “administratively feasible” method must exist for identifying individual class members and ascertaining their class membership. The heightened ascertainability requirement poses a particular threat to consumer class actions,131 but it could place some antitrust class actions at risk as well. Indeed, it may be just another way to impose a requirement that all members of a proposed class suffer injury.

Further, some anti-class action groups are on a campaign to eliminate or curtail cy pres.132 The groups apparently recognize that eliminating or restricting cy pres can undermine consumer class actions seeking to recover small amounts of money. And some courts have been overly restrictive about the use of cy pres as part of class settlements.133 The Chief Justice has expressed skepticism of cy pres as part of class settlements, noting “fundamental concerns surrounding the use of such remedies in class action litigation,” and that in a “suitable case, this Court may need to clarify the limits on the use of such remedies.”134

Not only the courts threaten the viability of class actions. The House is considering H.R. 1927, the “Fairness in Class Action Litigation Act,” which would effectively eviscerate consumer, antitrust, employment, and civil rights class claims. The bill bars class certification unless proponents demonstrate, based on a “rigorous analysis,” that each person in a class has suffered “the same type and scope of injury.” This standard would be inconsistent with the letter and spirit of Rule 23. It would go beyond requiring harm to all class members, imposing an extreme and arbitrary standard that would prevent certification of many classes that would meet the requirements of the current Rule 23 and case law interpreting it.

At first, a recent interest in revising Rule 23 on the part of the Advisory Committee on Civil Rules also appeared to be a threat. However, the “conceptual sketches” provided by the Rule 23 subcommittee of the Advisory Committee on Civil Rules in April—a prelude to presenting draft amendments to the full committee at its Fall 2015 meeting—appear on the whole to be even-handed and reasonable, more likely to improve the functioning of Rule 23 than to damage it. The sketches address settlement approval criteria, settlement class certification, cy pres, objectors, Rule 68 offers and mootness, issue classes, and notice. Indeed, it is a sign of the reasonableness of the sketches that critics of class actions have sharply criticized them.135

The next administration should work to preserve class actions and, with them, private enforcement of the antitrust laws. It should submit amicus briefs in support of reasonable interpretations of Rule 23, particularly before the Supreme Court. And it should oppose legislation designed to prevent access to justice and to use procedural ploys to deprive consumers of their substantive legal rights.

G. Antitrust Injury

The “antitrust injury” doctrine requires a private plaintiff to prove that its alleged “injury is of the type the antitrust laws were intended to prevent, and that flows from that which makes defendants’ acts unlawful.”136 As a doctrine akin to proximate or “legal” cause in torts,137 it makes sense; injuries caused by an antitrust violation, but which are essentially fortuitous and not within the intended scope of the antitrust statute or rule, should not be compensable under section 4 of the Clayton Act. However, as one commentator has noted, the “term ‘antitrust injury’ is egregiously overused in a variety of contexts where it does not belong, to the confusion of the litigants and the court, not to mention future courts and litigants attempting to wrestle with erroneous precedent.”138 In particular, the doctrine has been misused by lower courts to dismiss cases at the pleading stage that should not have been dismissed or to avoid addressing the merits of claims.139

We urge the next administration to examine critically the expansive use of the antitrust injury doctrine by the lower courts and to participate as an amicus in appropriate cases to clarify the limited nature of the doctrine.

#### CP lacks a private right AND treble damages---that fails

John B. Kirkwood 21, Professor of Law, Seattle University School of Law. American Law Institute. Executive Committee, AALS Antitrust and Economic Regulation Section. Advisory Board, American Antitrust Institute. Advisory Board, Institute for Consumer Antitrust Studies, "Tech Giant Exclusion," Florida Law Review, Forthcoming, p. 7, 01/15/2021, SSRN.

Antitrust policy, then, should to continue to focus on protecting consumers from market power and workers and other vulnerable suppliers from monopsony power. This orientation would not immunize the tech giants – they have engaged in exclusionary tactics that appear to have harmed consumers and possibly workers. The problem is that when they have disadvantaged third parties that use their platforms, they have not violated the Sherman Act. There is no evidence, to my knowledge, that their conduct has created monopoly power or a dangerous probability of monopoly power in any relevant market. As a result, the tech giants could continue to exclude third parties with little fear of substantial financial penalties.13

[FOOTNOTE] Section 5 of the FTC Act is unlikely to fill this gap. While Section 5 does prohibit anticompetitive conduct that falls short of monopolization, there is no private right of action under Section 5 and no treble damages. The FTC might bring a restitution action in district court, but the Commission’s power to do so is in doubt and the Commission has never tried to exercise it in a case involving exclusionary conduct outside the bounds of Section 2. See infra Section V.A. Section 5, in short, is unlikely to supply the needed deterrence. [END FOOTNOTE]

### 2AC – States CP

#### States have limited jurisdiction and varying solutions over blockchain assets – increases costs and confusion.

Massad 19 (Timothy, Senior Fellow, The John F. Kennedy School of Government, Harvard University, March 2019, “It’s Time to Strengthen the Regulation of Crypto-Assets ,” <https://www.brookings.edu/wp-content/uploads/2019/03/Timothy-Massad-Its-Time-to-Strengthen-the-Regulation-of-Crypto-Assets-2.pdf>) MAM

Why State Regulation is Not a Substitute

We cannot expect state regulation to fill the gap. Although crypto-asset intermediaries are subject to regulation under many states’ money transmission laws, these laws vary enormously and do not provide the comprehensive framework we need. New York has implemented a new “BitLicense” regulation that was the first and remains one of the strongest. It imposes a licensing requirement and a variety of requirements on crypto-asset exchanges and wallets. These elements include capital requirements, custody and customer protection standards, complaint procedures, compliance with anti-money laundering, and business continuity, disaster recovery and cybersecurity requirements.67 The New York Department of Financial Services reported eleven exchanges that had received a license as of February 2019.68

However, it is worth considering whether this licensing requirement can significantly improve the market. It is difficult for DFS, as a state regulator with **limited jurisdiction over** these **markets**, to have much of an impact. One could even question whether its licensing requirement has given a false sense of legitimacy to those that have bothered to register.

Indeed, another New York authority — the Office of the New York Attorney General — recently issued a report as part of a new “Virtual Markets Integrity Initiative” that illustrates just how weak the regulatory framework is. The OAG contacted thirteen platforms to inquire about their policies and procedures; only nine agreed to cooperate, but those included some of the largest in the U.S. such as Bitfinex, Coinbase and Gemini. The report found that “virtual asset trading platforms have not […] implemented common standards for security, internal controls, market surveillance protocols, disclosures or other investor and consumer protections […] Accordingly, customers […] face significant risks.” The principal concerns noted by the OAG were: (i) the potential for conflicts of interest in light of the multiple roles these platforms play; (ii) a failure to “implement serious efforts to impede abusive trading activity; and (iii) “protections for customer funds are often limited or illusory.”69

In the area of potential trading abuses, the report notes a number of problems, such as **failure to police** whether users create multiple accounts (which can then be used to engage in wash trading), failure to disclose order types, and lack of policies on or surveillance of automated trading. The report says, “While participating platforms expressed their commitment to combating market manipulation, only a few reported having a formal policy in place, defining the types of conduct the platform believes to be manipulative or abusive, and outlining how such trading behavior is to be detected and penalized.”

For all the problems noted, the report probably presents the exchanges at their best—that is, it understates the problems. The report is, after all, simply a survey of what the exchanges claim to do based on their responses to the questionnaire. The Attorney General’s office did not actually investigate whether any exchange lives up to its claims.

While the New York BitLicense approach is at least admirable in its objective to strengthen regulation, other states have gone the other way. Wyoming, for example, has adopted several laws designed to make the state much friendlier for crypto-asset businesses, including exemptions of certain transactions from money service business laws and securities laws.71 Proponents of Wyoming’s approach have stated that their goal is to make Wyoming the Delaware of crypto, a reference to Delaware’s business friendly regulator system.72 Wyoming is essentially creating its own definition of securities for purposes of the crypto industry.73 Although this would not change the federal law treatment of what is a security, it could **create confusion**. As another point of contrast, Hawaii officials reportedly insisted that Coinbase maintain cash reserves equal to the value of all cryptocurrency traded on its platform, which led the firm to leave the state.74

Recent efforts to create a standardized state law approach are a step forward but **will not provide** the **necessary** framework of **oversight.** The Uniform Law Commission (ULC, or the National Conference of Commissioners on Uniform State Laws) has drafted a model law called the Uniform Regulation of Virtual Currency Businesses Act. It covers businesses that engage in (i) the exchange of virtual currencies for cash, bank deposits or other virtual currencies, (ii) the transfer of virtual currencies from one customer to another or (iii) certain custodial and fiduciary services related to virtual currency. It regulates such businesses in a manner similar to the regulation of money transmitters under the Uniform Money Services Act. However, it does not apply to banks or to activity that is regulated by the SEC or the CFTC, among other exclusions.75

It requires covered businesses to be licensed and to comply with basic disclosure requirements (such as regarding fees and liability for an unauthorized or mistaken transfer). It contains security and net worth requirements although the levels are left to the state.76 It requires a covered business to have sufficient virtual currency on hand to satisfy the entitlements of its customers and ensures that customer property is not subject to the claims of the intermediary’s creditors. It requires a business to have programs or policies regarding fraud prevention, risk management, prevention of money laundering, business continuity, disaster recovery and cybersecurity and other matters, but it does not provide any specific requirements in those areas.

While the Uniform Regulation of Virtual Currency Businesses Act is a good framework for state regulation, its lack of specific regulations in many of the aforementioned areas, as well as the explicit deference to federal securities and commodities law noted earlier, make clear that it is not a substitute for comprehensive federal oversight. Allowing for states to take the lead and experiment can be a virtue in some public policy areas. In the case of crypto regulation, there are certainly aspects where state law should take the lead, such as areas of commercial regulation traditionally left to the states. This would include the implications of virtual currencies under the Uniform Commercial Code. The ULC is at work on this.

As a general matter however, state regulation would be a weak foundation for an industry that strives to be international. When regulatory requirements vary by state, it is expensive to build compliance systems, and difficult to create national, let alone international, markets. Our securities markets would not have become the envy of the world if we had relied solely on state blue sky laws and never adopted the Securities Act and Securities Exchange Act. We should not expect state law to fill the need for this new sector either.

### 2AC – Section 5

#### CP lacks a private right AND treble damages---that fails

John B. Kirkwood 21, Professor of Law, Seattle University School of Law. American Law Institute. Executive Committee, AALS Antitrust and Economic Regulation Section. Advisory Board, American Antitrust Institute. Advisory Board, Institute for Consumer Antitrust Studies, "Tech Giant Exclusion," Florida Law Review, Forthcoming, p. 7, 01/15/2021, SSRN.

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#### Courts strike it down. There will be no deference.

John O. McGinnis 21, George C. Dix Professor in Constitutional Law at Northwestern University and Contributing Editor at Law & Liberty, “Abandoning the Consumer Welfare Standard”, Law & Liberty, 8/26/2021, https://lawliberty.org/abandoning-the-consumer-welfare-standard/

The Prospects

The Executive Order, however ill-conceived the specifics are, will do the most damage if it changes antitrust law fundamentally. And here the Biden administration happily faces problems. We have had forty years of bipartisan competition policy focused generally on consumer welfare. The President does not have a political eraser to wipe that away.

One possibility is for the Biden administration to persuade Congress to enact major changes in antitrust law. The House Judiciary Committee has passed a few bills that would make is harder for tech companies to merge with other companies. But these measures are not yet going anywhere on the House floor, and it will be difficult, if not impossible, to get any substantial changes in antitrust law through the evenly divided Senate.

Thus, the administration has pinned its strategy on transformation through administrative fiat. To that end, it appointed Lina Khan, a 32-year-old associate law professor to become Chairman of the FTC. Khan may be the single most radical appointment in the Biden administration. She opposed Amazon’s acquisition of Whole Foods, although Amazon and Whole Foods together constitute a very small part of the grocery market, and no other company in the history of the United States has been more innovative than Amazon.

Khan has begun by voting along with her Democratic colleagues on the commission to revoke a policy of the FTC supported by both Democratic and Republican administrations that essentially defined “unfair method of competition” by reference to methods that undermined consumer welfare. The idea no doubt is to write a regulation that would provide a more open-ended approach, perhaps taking into account other values like democracy and decentralization, even if these are at the expense of consumer welfare.

But it is not at all clear Khan can succeed. On such a central question as the definition of competition, courts may not give her agency much deference now that the Roberts Court appears to have stopped applying Chevron—the quintessential modern case for agency deference—to major questions raised by a statute. The meaning of competition is obviously the major question for competition law, and courts are likely to determine that for themselves, influenced by decades of their own consumer welfare jurisprudence.

Beyond that technical obstacle, Khan may be a poor choice for overhauling antitrust law because of her lack of practical experience in litigation or administration. She has already alienated her agency staff by refusing to let them speak at professional panels, as they have for years. That is a rookie mistake. Moreover, she has been so strident in her attacks as an activist against companies like Google and Amazon that the courts are likely to look at her enforcement actions with suspicion, even if the companies do not get her recused for her past opinions.

Even if the Biden administration is unlikely to succeed in the near term in transforming antitrust, it has put on the table a new vision, however amorphous, that may well influence the approach of Democratic administrations and legislators for years to come. We are moving from an era of bipartisan consensus around a constrained and economically focused antitrust law to an era of fundamental partisan disagreement. In that sense, antitrust law will become—like many other areas of our law—a reflection of polarization and a source of instability. But here the folly and instability will make us poorer.

#### No way they solve - Congress blows up the FTC in response

Sandeep Vaheesan 17, Regulations Counsel at the Consumer Financial Protections Bureau, “Resurrecting "A Comprehensive Charter of Economic Liberty": The Latent Power of the Federal Trade Commission”, University of Pennsylvania Journal of Business Law, 19 U. Pa. J. Bus. L. 645, Spring 2017, Lexis

C. Recognizing the Threat of Adverse Congressional Action Does Not Compel Continued Adherence to the Antitrust Status Quo

Among those sympathetic to an expansive Section 5, some are likely to express reservations about its political feasibility. History certainly lends support to this concern. Congress has been hostile to an activist FTC in the past and could be expected to move to rein in any activism. In the 1970s, the FTC zealously pursued its antitrust and consumer protection missions. 251 This period of aggressive enforcement and rulemaking triggered a powerful backlash from corporate America. 252 The Washington Post condemned the Commission as the "National Nanny" in a stinging editorial. 253 This period of zeal ended poorly for the FTC. Congress [\*694] asserted new power over the agency and imposed additional procedural conditions on the use of its consumer protection authority. 254

This fear of a political backlash from business and Congress may be the strongest line of criticism of an expansive Section 5. Corporations pour money into Congressional campaigns to ensure that their interests are represented and advanced. Although the FTC has been averse to policy activism or innovation for decades, the House has tried to limit the FTC's authority to challenge mergers under Section 5, in the name of creating harmony between the FTC and the DOJ. 255

The recent experience of another federal agency is instructive. Congressional Republicans, with the support of some Democrats, have been trying to hobble the Consumer Financial Protection Bureau ("CFPB"). 256 The CFPB is seen as aggressively pursuing its statutory mission, bringing a wide range of enforcement actions and writing a number of rules to regulate consumer finance markets. 257 In light of its vigor, the opposition from Congress does not come as a surprise. Even under more favorable political circumstances, an FTC that seeks to breathe life into Section 5 is certain to invite comparable Congressional opposition.

The probable reaction from many ideologically or financially captured members of Congress should not be underestimated, let alone ignored. Corporate interests and their Congressional allies would seek to curtail any Section 5 expansions. The FTC is a creation of Congress and so must answer to Congress. Congress can undertake a range of actions to limit the FTC's day-to-day ability to function and its statutory power. At an extreme, Congress could repeal the FTC Act and shut down the FTC entirely. The risks to the FTC's future would include various existential threats and should not be brushed aside. Undertaking a reinterpretation of Section 5 without an awareness of political dynamics on Capitol Hill would [\*695] be a grave mistake.

### 2AC – Ex Ante

#### Companies circumvent, it causes regulatory capture, rent seeking, AND links to the NB.

Lawrence J. Spiwak 21, President of the Phoenix Center for Advanced Legal and Economic Public Policy Studies. of the Phoenix Center for Advanced Legal and Economic Public Policy Studies, "A Poor Case for a ‘Digital Platform Agency’," Phoenix Center Perspectives, 21-02, 03/09/2021, pg. 8.

Conclusion

By nearly all accounts, the regulation of economic activity has warts. Firms are not passive recipients of regulation but adapt their practices to regulation to minimize impact. Regulators tend toward capture and their efforts often do more harm than good. As such, we may rightly demand compelling arguments for a new regulator, especially one with broad scope and unbridled power over the most important and dynamic segment of the modern economy. The Wheeler Proposal’s call for a Digital Platform Agency fails in that regard.

Antitrust, while imperfect, is grounded in precedent and is conducted in a dispassionate manner, thus avoids the pitfalls of regulatory capture and rent seeking accompanying regulation.58 Accordingly, if we are concerned that antitrust enforcement is lacking, then perhaps increasing the budgets of the DOJ and the FTC, coupled with more alert Congressional oversight, is the better policy choice at this time.59

#### Distinction between antitrust and ex ante regulation is a false narrative – lots of examples of ex ante regulation in antitrust law

Kobayashi & Wright 20 [Bruce, Paige V. and Henry N. Butler Chair in Law and Economics at the Antonin Scalia Law School at George Mason, former Director of the Bureau of Economics at the U.S. Federal Trade Commission, Senior Economist in the Division of Economic Policy Analysis of the FTC, Joshua, University Professor and the Executive Director of the Global Antitrust Institute at Scalia Law School at George Mason University, Commissioner at the Federal Trade Commission, “Antitrust and Ex-Ante Sector Regulation,” *Report on the Digital Economy*, <https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/>, accessed 10/05/21, JCR]

There have been many calls to replace or at least supplement the existing system of litigation based antitrust under the rule of reason with ex-ante regulation as a way to control anticompetitive behavior by large technology and platform firms.[[1]](https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/#_ftn1) This chapter first analyzes and explains some potential ways to distinguish ex-ante sector regulation from antitrust and competition systems based upon ex-post liability. While many have proposed that ex-ante regulation should be used in lieu of current litigation based antitrust law, this narrative is a false one—antitrust law and its institutions, throughout its history and including the present, has incorporated features of ex-ante regulations in both its laws and institutions. Indeed, many of the proposed ex-ante approaches use traditional antitrust concepts that incorporate some components of proposals for ex-ante regulation. These include the use of ex-ante determinations of inherently and commonly unreasonable practices subject to per se condemnation, use of quick look or truncated analyses under the rule of reason, procedural changes dependent on prior information, such as the adoption of antitrust presumptions and changes to the standard of proof and the burden of proof.[[2]](https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/#_ftn2) Indeed, the recent history of the antitrust laws and the incorporation of economics into antitrust law has resulted in the replacement of unsupported presumptions and per se rules with a rule of reason analysis that evaluates the impact of a challenged behavior on competition. However, antitrust law also recognizes that not all antitrust inquires require the same degree of fact-gathering and analysis, and currently incorporates truncated forms of analysis under the rule of reason and presumptions when supported by the evidence.[[3]](https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/#_ftn3) Other proposals would go beyond the existing bounds of antitrust and use an approach based on ex-ante sector regulations used to control natural monopolies.[[4]](https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/#_ftn4) This chapter focuses specifically on the choice to use sector-based regulation and/or antitrust to regulate competition and the implications that follow from that choice. In theory, the initial assignment of tasks between antitrust and sector regulation should reflect the comparative advantage of each regulatory approach, including the competence of the institutions set up to administer the regulatory regime.[[5]](https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/#_ftn5) The chapter applies this principle to explain why antitrust is a relatively poor framework for price regulation and affirmative duties to deal with rivals. Based upon comparative advantage, regulation of price and affirmative duties to deal are best left to sector regulators with industry specific expertise enforcing specific ex-ante regulations containing specific duties. We then analyze the legal and economic interaction between the antitrust laws and sector regulation. In particular, when sector regulation and the antitrust laws are used to regulate competition, the two regimes can generate conflicts. In such cases, the application of antitrust law can be limited by the implied immunity doctrine and similar judge made regulatory immunities. Similar limits on the antitrust laws apply to conflicts between the federal antitrust laws and state regulations, which are controlled by the state action doctrine. While the implied immunity doctrine and many state action cases often illustrate the case where competition displacing regulations substitute for antitrust law, antitrust and sector regulation also can serve as complements.[[6]](https://gaidigitalreport.com/2020/10/04/ex-ante-regulation-versus-ex-post-antitrust-enforcement/#_ftn6) Antitrust law can be applied to control deregulated portions of an industry and can serve to fill unspecified gaps in the regulation. Antitrust law is also used to constrain industry capture and other public choice problems generated by sector regulations. However, even in the case of antitrust and regulation as complements, limits on antitrust are still important, as it is critical that each regulatory approach is limited to operate in a way that supports its ex-ante assigned function. The importance of sensible limits on antitrust and sector regulation is magnified by the Court’s expansion of the implied antitrust immunity doctrine that forces antitrust and regulation to function as substitutes in potential overlap areas. Moreover, achieving the right balance between antitrust and regulation in practice can be a challenging, long, and error filled process. The chapter illustrates the frictions in the economic and legal relationship between antitrust and regulation by examining the application of the antitrust laws to the conduct of pharmaceutical companies whose patents have been challenged under Paragraph IV of the Hatch-Waxman Act. The Hatch-Waxman Act represents one of the most visible forms of sector regulation of innovation. In particular, the Act, along with state generic substitution laws (GSLs), attempts to craft a specific solution to the use/creation tradeoff through specific modifications of the patent laws and the competitive relationship between branded drugs and firms producing generic versions of the drug. The imperfect regulatory structure generates incentives which are not intended or foreseen by those drafting the statute, which is first addressed through antitrust litigation, and then legislation to reallocate the assignment of tasks between antitrust and regulation. The history of the Act and State GSL illustrates the complex and evolving relationship between imperfect regimes as well as the difficulty of designing beneficial regulatory structures to control competition. As noted in the introduction, a common theme in many proposals to improve the regulation of competition in the 21st Century highlight the use of what their proponents label ex-ante regulatory regimes.[7] Thus, it is critical, as a preliminary matter, to define the essential features of ex-ante regulation that differentiate this approach from traditional litigation-based antitrust enforcement. Table 1 lists several ways in which ex-ante regulation and ex-post liability approaches might differ. However, as will become clear, many of these identified differences between ex-ante regulation and ex-post litigation are less substantial in practice and of limited use as an organizing principle. As we will demonstrate, antitrust law already incorporates many features of ex-ante regulation.[8] Instead, we find that the best approach to distinguish between antitrust and regulation, following Carlton and Picker (2014), is one that focuses upon substantive differences between antitrust and regulation, as well as the institutional competence of the regulator tasked to administer the regime. A natural starting point for many analyses of the difference between ex-ante regulation and ex-post liability is timing. Ex-ante regulation attempts to impose its corrective incentives on the activity of economic actors before or at the same time it occurs. As a result, the two approaches differ in both the instrument and remedy used to generate incentives. Ex-ante regulation approaches focus on input levels[9] and other ex-ante measurable metrics to impose incentives (e.g., Pigouvian taxes) or to directly regulate activity levels.[10] In contrast, litigation-based liability systems focus on outputs or outcomes and use harm-based damages to shape incentives that alter the firm’s behavior or activity level. In a frictionless world void of transactions and information costs, these two systems are capable of generating identical incentives.[11] However, in real economies with positive transactions and information costs, the performance of the two systems will differ. Because ex-post liability systems evaluate the activities of firms later in time after information on the effects of an activity has been revealed, the information advantage favors the use of ex-post liability systems when there is heterogeneity that is known to the regulated firms (but not the regulator) ex-ante. But this advantage may not be important when such heterogeneity is minimal or when it cannot be predicted ex-ante by the regulated firms.[12] Moreover, the absence of effective ex-post remedies may favor the ex-ante approach even with heterogeneity.[13] While this literature successfully identifies reasons for the use and timing of particular regulatory instruments, it is less clear that it usefully distinguishes between antitrust and many proposals for the ex-ante regulation of competition. Under this definition based upon timing and regulatory instruments, there are prominent examples of ex-ante regulation of competition within antitrust law. Consider the requirements for premerger notification under the Hart-Scott-Rodino Act (HSR Act) in the U.S.,[14] and similar requirements in other jurisdictions around the world.[15] Under the HSR Act, parties in covered transactions must notify the U.S. antitrust agencies of the proposed transactions, file certain information, and wait a specified time period before consummating certain mergers or acquisitions.[16] Prior to the enactment of the HSR act, many challenges to mergers occurred after the merger had been consummated. Agencies often lacked the evidence to prove that a transaction would lessen competition prior to the consummation of the merger, making it difficult to obtaining preliminary injunctions to prevent the parties from merging.[17] While challenges to consummated mergers may allow for the direct observation of the anticompetitive effects of the merger and mitigate the agencies’ information disadvantages,[18] the antitrust authorities were frequently unable to restore competition lost to a consummated anticompetitive merger due to the inability to secure timely and effective remedial relief.[19]

### 2AC – Tradeoff

#### Aff is a drop in the bucket – tidal wave of mergers and Facebook thumps anyway.

Graham 9/16/21 (Jeb, Author of A Well-Tailored Safety Net & ObamaCare Is a Great Mess; writes about economic policy and financial markets at Investor's Business Daily, 9-16-2021, Biden Takes On Big Tech — And The Supreme Court, Investor's Business Daily, https://www.investors.com/news/antitrust-enforcement-push-by-ftc-biden-takes-on-amazon-google-supreme-court/)

Wall Street's early reaction to the Biden administration's attempt to stiff-arm M&A activity has been to step on the gas. The FTC said in August that it's struggling to stay abreast of **a "tidal wave" of mergers.** The 2,436 deal filings through August have already blown past the elevated annual totals from 2017-2019.

Despite a skeptical, if not hostile, attitude among antitrust enforcers, the vast majority of these deals are likely to go through.

While Congress may increase funding for merger enforcement, the FTC and DOJ are already devoting significant resources to the Facebook and Google antitrust cases. **"They can only fight so many battles,"** Kovacic said.

### 2AC – Antitrust DA

#### Lack of blockchain regulations kills growth – antitrust is key.

Massarotto 19 [Giovanna, Academic Fellow at the Center for Technology Innovation and Competition (CTIC) at UPenn, “FROM DIGITAL TO BLOCKCHAIN MARKETS. WHAT ROLE FOR ANTITRUST AND REGULATION,” January, <https://bit.ly/3BvPmrz>, JCR]

If we look back historically, regulation and guidelines are fundamental components in the prevention of forms of inequality, illegal activities, and the abuse of market power in free and open markets. Presently there are no regulations to guide the growth and ensure an environment of trust among blockchain providers and users. Antitrust surveillance is the first step in preventing monopoly and collusion among network participants, in addition to overseeing markets until regulations are in place.172 Regulators and antitrust enforcers have a huge responsibility in the development of blockchain markets that we cannot fully envisaged presently although we know it very possibly might include the creation of a universal public blockchain. By its nature, the competitive market process looks for innovative and unanticipated solutions. As outlined above, antitrust, regulation and innovation are not separate issues.173 The path of innovation largely depends on the action of both regulators and antitrust agencies. Markets rely on the trust of users. Market speculation, uncontrolled centralization and private supervisory powers can all promote a lack of trust rather than trust. The real challenge for antitrust enforcers and regulators is neither digital markets nor artificial intelligence where the adaptation of traditional antitrust rules (per se and rule of reason) in those evolved markets seems to be sufficient. The main focus of antitrust agencies should be how to foster the innovation process and the likely shift from closed and centralized platforms to open and decentralized platforms. Antitrust enforcers need to preserve both economic democracy and innovation to benefit consumers in the end not competitors. Antitrust law should encourage competition to increase consumer welfare and stimulate the growth of markets, no matter what the harm to a competitor, if the result of such a conduct benefits consumers (Microsoft v. Java). Antitrust enforcers must endorse and oversee the process of the decentralization phenomena on behalf of free open markets and economic democracy. Antitrust enforcers will be crucial in maintaining the delicate balance between over controlling the actions of large players and keeping them incentivized to lead the creation of new technologies. Regulators are ideally placed to encourage user trust by preventing the misuse of blockchain and similar cutting edge technologies when these platforms take off becoming critical and complex high-traffic markets.174 The Internet benefits from a “sophisticated governance ecosystem, the whole world of blockchain and digital currencies is the Wild West”175 and could only benefit from guidelines. Similar to the Internet, markets can encourage the development of a public universal blockchain. Such a blockchain would need consensus and trust to become a universal open technology—not controlled but not uncontrolled. 176

#### Broader IOT adoption causes widespread innovation and competition

Broadman 21 (Harry G. Broadman is a managing director and chair of the Emerging Markets and CFIUS practices at Berkeley Research Group, on Johns Hopkins University’s faculty, and an independent corporate director, **9-30**-21, Global Supply Chains’ Crisis Is Much Bigger Than The Pandemic; The Transformation They’re Undergoing Is The Cure, Forbes, <https://www.forbes.com/sites/harrybroadman/2021/09/30/global-supply-chains-crisis-is-much-bigger-than-the-pandemic-the-transformation-theyre-undergoing-is-the-cure/>) MAM

For the logistics sector, a major enabler of rapid digitalization is the deployment of the internet of things (IoT), where otherwise traditional devices are becoming connected to the internet and have the ability send and receive information.

IoT enables the rapid exchange of information in real time between all parties involved along a supply chain. That is, IOT is energizing the **move toward greater competition** and the desire for greater speed and reduced costs. This real time access to information is itself directly reducing operational costs and improving decision-making on both the demand and supply sides of the market.

The transformation underway is already fostering an entirely **new cycle of innovation**, not only **within the logistics sector** per se but **also in the industries**

attendant to the sector. And of course there is innovation underway in the operating processes of the firms at the production end of the supply chain, just as there is innovation in the way consumers’ obtain and use goods at the other end.

It would not be an understatement to say that over time this revolution could well fuel a new regime of how the global **economy functions**; indeed, perhaps usher in a wholly new phase of globalization.

#### Tech competition replaces a war.

Lu Zhenhua 20, Wang Zili and Xu Heqian citing an interview with Professor Yan Xuetong, dean of the Institute of International Relations at Tsinghua University, 3/14/20, “China and the U.S. Won’t Go to War, but Will Fight for Tech Supremacy, Tsinghua Professor Says”, https://www.caixinglobal.com/2020-05-14/china-and-the-us-wont-go-to-war-but-will-fight-for-tech-supremacy-tsinghua-professor-says-101554127.html

“The more fierce China-U.S. tech competition gets, the less likely it is that they will resort to proxy wars for dominance on natural and geographic terms,” Yan said. “It’s not because they don’t want to use the proxy war strategy, but because it’s not a feasible way to compete in a digital era.”

As a result of the shift, Yan, who is also the general secretary of Beijing-based annual international security conference the World Peace Forum, believes that the world’s two largest economies won’t go to war over East Asia’s hotspots, such as the South China Se

a and the Taiwan Strait, despite high tensions.

“It’s less likely that there will be a military mishap in those areas,” he said. “Even if it happens, the relevant parties will be able to swiftly contain it and avoid letting it escalate into a war.”

China has long protested the U.S. military’s “freedom of navigation” operations and fly-overs in the South China Sea, and the U.S. Navy’s operations in the Taiwan Strait.

Military mishaps have previously occurred in the South China Sea. In 2001, southeast of China’s Hainan province, a U.S. Navy plane on a surveillance mission collided with a Chinese PLA Navy jet. The U.S. plane’s crew was detained by Chinese authorities after an emergency landing on Hainan, while the pilot of the Chinese jet went missing and was later declared dead.

In late September 2018, a Chinese warship reportedly came within 41 meters of a U.S. destroyer sailing near the Spratly Islands, known in China as the Nansha Islands.

Yan said now “the three parties including the U.S., Chinese mainland and Taiwan region have all had their military activities under strict control.” None of the parties would intentionally engage in a conflict in either the South China Sea or Taiwan Strait, he said.

Meanwhile, the Covid-19 pandemic, which has infected over 4.3 million people and killed nearly 300,000 globally, will drive the two countries to focus on technological dominance.

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#### Your link is generic to antitrust -- antitrust increases business confidence and growth broadly

OECD 14, Organization for Economic Cooperation and Development, “Factsheet on how competition policy affects macro-economic outcomes”, OECD, October 2014, https://www.oecd.org/daf/competition/2014-competition-factsheet-iv-en.pdf

Most importantly, it is clear that industries where there is greater competition experience faster productivity growth. This has been confirmed in a wide variety of empirical studies, on an industry-by-industry, or even firm-by-firm, basis. Some studies seek to explain differences in productivity growth between industries using measures of the intensity of competition they face. Others look at the effects of specific pro-competitive interventions, particularly trade liberalisation or the introduction of competition into a previously regulated, monopoly sector (such as electricity).

This finding is not confined to “Western” economies, but emerges from studies of the Japanese and South Korean experiences, as well as from developing countries.

The effects of stronger competition can be felt in sectors other than those in which the competition occurs. In particular, vigorous competition in upstream sectors can ‘cascade’ to improve productivity and employment in downstream sectors and so through the economy more widely.

The main reason seems to be that competition leads to an improvement in allocative efficiency by allowing more efficient firms to enter and gain market share, at the expense of less efficient firms (the so called between-firms effect). Regulations, or anti-competitive behaviour preventing entry and expansion, may therefore be particularly damaging for economic growth. Competition also improves the productive efficiency of firms (the so called within-firms effects), as firms facing competition seem to be better managed. This can even apply in sectors with important social as well as economic outcomes: for example, there is increasing evidence that competition in the provision of healthcare can improve quality outcomes.

There is also evidence that intervening to promote competition will increase innovation. Firms facing competitive rivals innovate more than monopolies (although after such competition a firm may of course end up with a monopoly through a patent). The relationship is not simple: it is possible that moderately competitive markets innovate the most, with both monopoly and highly competitive markets showing weaker innovation. However, as competition policy does not focus on making moderately competitive markets hyper-competitive, but rather on introducing or strengthening competition in markets where it does not work well, this would still imply that most competition policies serve to promote innovation.

Because more competitive markets result in higher productivity growth, policies that lead to markets operating more competitively, such as enforcement of competition law and removal of regulations that hinder competition, will result in faster economic growth.

Is there evidence that pro-competitive policies are effective?

In addition to this evidence that competition promotes growth, there have been studies directly of the effects of competition law itself, and of product market deregulation. Although it is difficult to distinguish the effects of individual policy changes, there are some studies showing that introducing competition law raises productivity. Conversely, the selective suspension of antitrust laws in the USA during the 1930s seems to have delayed recovery.

Many studies of the effect of competition law use international comparisons of different countries’ experiences, to assess whether countries with competition laws (or longer-standing, or more effective competition laws) achieve faster economic growth. The task is a difficult one because of many other factors that affect the overall economic growth rate, including other policies introduced at the same time (e.g. Eastern Europe’s transformation after 1989). Some studies find no effect, but the overwhelming majority of such studies do find a positive effect of competition law on economic growth. Most ascribe this effect to increased productivity, although there may also be an effect on investment, especially in developing countries, perhaps because competition laws boost business confidence and reduce corruption.

#### No US-China war

Abraham Denmark et al 20 is director of the Asia Program at the Woodrow Wilson International Center for Scholars and a former deputy assistant secretary of defense for East Asia, April 16, “SAME AS IT EVER WAS: CHINA’S PANDEMIC OPPORTUNISM ON ITS PERIPHERY”, <https://warontherocks.com/2020/04/same-as-it-ever-was-chinas-pandemic-opportunism-on-its-periphery/>

While Washington and Beijing’s overheated rhetoric and mutual recriminations amid the ongoing coronavirus pandemic are grabbing headlines, equally important is what has been playing out across China’s eastern and southern peripheries over the past several weeks. At a moment when the Chinese Communist Party has been touting the generosity of its approach to COVID-19, there has been a marked increase in the number of incidents between China and its neighbors. Beijing has used its naval and paramilitary forces as well as its increasingly sophisticated information operations to ratchet up tensions, probe responses, and see how much it can get away with. This raises the question of what exactly China is up to. Has Beijing truly embraced a new approach of cooperation with its neighbors? Is it trying to take advantage of the COVID-19 mess to assert its interests more aggressively? Or is this simply an extension — albeit an opportunistic one — of its pre-pandemic strategy? BECOME A MEMBER The novel coronavirus pandemic has not curtailed geopolitics — in fact, it seems to be intensifying preexisting tensions. Understanding if and how China’s foreign policy has shifted is critical for assessing what is happening along China’s periphery and what Beijing might do next. Answering these questions is necessary for the United States and its allies to fashion a proper response. This, in turn, demands understanding what Beijing was doing before the crisis and thinking through what might actually signal a significant shift toward a more confrontational foreign policy. How Did I Get Here? China’s Latest Moves Chinese ships and aircraft have been involved in a spate of recent incidents across China’s maritime periphery. While there have been no fatalities, lives were certainly put at risk. Considering these incidents have involved two of China’s primary regional rivals — Japan and Vietnam — as well as Taiwan, the possibility that Beijing may see the COVID-19 pandemic as an opportunity to press an advantage during a time of geopolitical distraction and uncertainty should be considered. In mid-March, a group of People’s Liberation Army (PLA) aircraft crossed the median line in the Taiwan Strait — an unofficial demarcation line between Taiwan and China — in an exercise intended to intimidate Taiwan by demonstrating China’s ability to conduct operations at night while also testing Taiwan’s ability to react. While PLA ships and aircraft have been operating within the vicinity of Taiwan for several years, the pace and assertiveness of these activities have noticeably increased in recent years: The latest incident was the fourth time in two months that PLA aircraft forced Taiwan’s air force to scramble and intercept. Considering the impending second inauguration of Taiwan’s leader, President Tsai Ing-wen, as well as dwindling levels of support in Taiwan for Beijing’s “One Country, Two Systems” formulation, these exercises are likely to grow even more common and assertive. In late March in the East China Sea, a Chinese fishing vessel collided with a Japanese destroyer. The collision ripped a hole in the destroyer, but the ship was able to move on its own, and its crew suffered no casualties. Beijing announced that one Chinese fisherman had been hurt and blamed the Japanese vessel for the incident, calling for Japan’s cooperation to prevent future incidents. It is unclear if the Chinese vessel was a part of China’s “maritime militia,” described by the U.S. Department of Defense as “an armed reserve force of civilians available for mobilization” that plays a “major role in coercive activities to achieve China’s political goals without fighting.” The South China Sea has also seen several recent incidents involving Chinese vessels. In early March, a Vietnamese fishing vessel was moored near a small island in the Paracel archipelago — islands claimed by both Vietnam and China, among others — when a Chinese vessel chased it and fired a water cannon, causing the boat to sink after hitting some rocks. The crew was rescued by another Vietnamese fishing boat, with Hanoi claiming that the fishing boat was rammed by the Chinese vessel. The U.S. State Department issued a statement in early April expressing its serious concerns about the incident and calling on China “to remain focused on supporting international efforts to combat the global pandemic, and to stop exploiting the distraction or vulnerability of other states to expand its unlawful claims in the South China Sea.” The State Department also noted that since the outbreak of the pandemic, “Beijing has also announced new ‘research stations’ on military bases it built on Fiery Cross Reef and Subi Reef, and landed special military aircraft on Fiery Cross Reef.” Most recently, a Chinese coast guard (CCG) ship — one of several Chinese ships that harassed a Philippine commercial vessel in September 2019 — was seen patrolling near the Scarborough Shoal, representing one of many CCG ships that have been patrolling nearly all of the disputed areas between China and the Philippines in the South China Sea. Are these incidents merely a coincidence? Are they a sign that Beijing is distracted by COVID-19 and the resulting historic economic slowdown, and aggressive local commanders are pushing the envelope of their own accord? Or is this merely the result of China fielding more ships and more aircraft, leading to a predictable increase in incidents and exercises? While these explanations are all plausible, a more likely driver of China’s actions is, in fact, continuity. These incidents are not unprecedented and likely do not indicate a new, post-pandemic Chinese strategy. Rather, these incidents are consistent with a Chinese approach to foreign affairs under CCP General Secretary Xi Jinping’s leadership that even before the outbreak of COVID-19 demonstrated flexibility, assertiveness, and a singular desire to exploit opportunities of external weakness and distraction in order to advance China’s interests. For more than a decade, Chinese leaders have come to see their external security environment as generally favorable, representing a “strategic window of opportunity” in which China could achieve its primary objective of national revitalization through economic and social development, military modernization, and the expansion of its regional and global influence. Since the 2008 to 2009 global financial crisis, Beijing has perceived an opportunity to expand its geopolitical power relative to the United States yet does not seek an explicit conflict with the United States or its allies. As a result, Beijing has intensified its use of “gray zone” tactics that seek to gradually advance Chinese interests using ambiguity and tactics that are tailored to not provoke a military retaliation. These activities also serve as “probing behavior” that tests how far China can go before encountering determined resistance. In recent years, Beijing has used this approach to increase pressure on Japan in the East China Sea and advance Beijing’s territorial claims in the South China Sea against the Philippines, Vietnam, Malaysia, and Indonesia. Throughout, Beijing’s approach to regional geopolitics has been adaptive to specific conditions, flexible to broader strategic trends, and opportunistic to perceptions of weakness or distraction in its adversaries. Chinese actions are not the reckless gambles they may initially appear to be. Rather, they are premeditated probes seeking to identify weakness and opportunity. Chinese pressure is carefully calibrated to fit, but not necessarily to exceed, a given situation. This approach reflects a maxim of Vladimir Lenin, whom the Chinese Communist Party continues to revere to this day: “Probe with a bayonet: if you meet steel, stop. If you meet mush, then push.” In multiple instances, Beijing has continued to push when it perceives that its actions are unlikely to cause a significant response. But when Chinese assertiveness has been met with resolute counterpressure, Beijing’s response has not been predictably escalatory.Beijing has demonstrated flexibility when confronted with determined opposition. Examples include Japan’s response to China’s rollout of an air defense identification zone in the East China Sea in 2013 and President Obama’s reported drawing of a red line around Scarborough Shoal to Xi Jinping in March 2016. Moreover, India’s response to Chinese activities in Doklam did not lead to war.