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### 1AC---Competition ADV

#### Contention 1 is Competition.

#### The present scope of monopolization policy permits Big Tech to engage in unilateral, exclusionary conduct---that wrecks lagging incumbents, nascent rivals, AND deters future entrants.

Jonathan B. Baker 21, Professor, Law, American University's Washington College of Law, "Protecting and Fostering Online Platform Competition," Journal of Competition Law & Economics, Vol. 17, Issue 2, June 2021, pg. 2-8.

Online platforms serve an important economic function: they facilitate economic interactions among end users and competition among sellers who connect to the platform. There are many varieties and many familiar examples. Amazon’s Marketplace connects shoppers and manufacturers, and facilitates competition among manufacturers. Apple and Google (Android) have app stores that connect applications developers and smartphone or tablet users, and facilitate competition among developers. Social media platforms (for example, Facebook and LinkedIn) connect members to one another, permit advertisers and advocates to reach members, and facilitate competition among advertisers and advocates. Search engines (for example, Google and Microsoft (Bing)) allow advertisers to interact with consumers and to compete with other advertisers.

Other online platforms include payment systems (for example, Visa and MasterCard), broadband providers, and restaurant reservation services (for example, OpenTable). Online platform markets often tend toward having a dominant platform. One reason involves network effects: as platforms gain more users, they often become more valuable to users, which may allow them to attract even more users. Network effects may be direct, as with social media and communications platforms, or they may be indirect, as with shopping platforms. More shopping platform consumers make the platform more attractive to sellers, and vice versa.

Scale economies in supply also may lead to a dominant platform. The fixed costs of platform operation may be large, while the costs of adding additional users may be small. Or important costs (for example, for product delivery) may decrease as the number of users grows.

The emergence of a dominant platform is not inevitable. In some markets, network effects and user switching costs may be naturally low or largely exhausted at a scale that allows multiple platforms to be viable. User control over data, as with portability, can reduce switching costs. Switching costs can be low in markets where users value multihoming (use of multiple platforms), and it is not prevented by the platform’s architecture or terms of use. Interoperability may permit multiple platforms to share network effect benefits. When users vary in their preferences for platform features, multiple differentiated platforms may successfully co-exist.

In markets with a dominant online platform, the most important competition may come from potential rivals and fringe competitors. If platform users are willing and able to switch to a rival with a superior product, dominance can erode. The market could even tip to the rival: as the rival benefits from increased network effects, it may attract even more users and it may become dominant. In some cases, even the mere possibility that a fringe rival or entrant could expand and replace the incumbent could constrain a dominant platform’s exercise of market power to some extent.

Exclusionary conduct by a dominant platform can suppress this key competitive force. Think, hypothetically, for example, of Google excluding Bing, Amazon excluding Walmart, or Facebook excluding Snap (Snapchat). Here, “exclusion” means disadvantaging and possibly marginalizing rivals, in addition to possibly forcing them to exit or preventing their entry. The dominant platform also may find ways to exclude nascent or potential platform rivals, not just current rivals, by impeding entry and expansion.

At the same time, exclusion of competitors does not necessarily add up to harm to competition. If one pizza parlor sets fire to a neighboring store, and there are a number of other pizza stores in the neighborhood, the local pizza market would likely remain competitive so the exclusionary conduct is most likely just a business tort, not also an antitrust violation. But when a market has a dominant firm, the loss of any rival—even a small rival or a potential one—can often reasonably be expected to reduce the odds that competition will emerge. Under such circumstances, harm to a competitor can be expected to create a material risk of harm to competition.

Dominant online platforms can adopt a number of strategies to exclude actual or potential platform rivals.4 One possible exclusionary strategy involves exclusive dealing: a dominant platform could simply forbid its sell-side users (for example, manufacturers or advertisers) from patronizing a rival platform. Platform most favored nations (price parity) provisions may have a similar exclusionary effect when the rival platform’s strategy is predicated on offering low seller prices. Or the platform may make it more difficult for rivals to attract users by increasing customer switching costs, for example, by introducing membership fees (perhaps combined with lower usage prices) or by preventing interoperability or multihoming.

The anticompetitive conduct in several prominent predigital examples of exclusionary platform conduct can be thought of as locking-in users by preventing multihoming or, alternatively, as exclusive dealing: the Lorain Journal newspaper excluded a local radio station entrant by declining to accept advertisements from merchants that advertised on the radio station;5 the FTD (telephone) flower delivery network impeded the development of rival networks by preventing its florists from signing up with other networks;6 and Mastercard and Visa prevented member banks from issuing credit cards offered by other payment systems, including American Express and Discover.7

In the digital world, dominant online platforms may adopt similar strategies to exclude platform rivals. They may also exclude platform rivals by foreclosing their access to data generated by users. With less data, or less data of certain types, an entrant or rival may have less ability to exploit network effects or obtain scale economies. In addition, dominant online platforms can exclude by acquiring potential rivals, whether nascent platform competitors or sellers of complementary (or vertically related) services that could become rivals. For example, some have suggested that Facebook harmed social media competition by acquiring Instagram, or Google maintained its advertising dominance or achieved dominance in advertising technology by acquiring DoubleClick.

When online platform owners also use the platform, moreover, they can employ exclusionary strategies against rival end users. It is not uncommon for platform owners to be users as well. Amazon runs a marketplace on which it sells private label products. Google has a search engine and also provides shopping services such as flight information. Apple runs an app store and offers services similar to those provided by some apps. For example, it offers Spotify’s music application as well as its own music application.

A platform that is also a user can impede entry or expansion by rival users through input or customer foreclosure—and it may have the incentive as well as the ability to do so by virtue of the fact that it is both user and provider. It could, for example, bias search results to favor its own products or to disfavor rivals’ products, or refuse to link to rival users. It could also target rival users for product design or price competition, perhaps using its privileged access to customer data when rival users have less access to data so they cannot easily fight back. These possibilities do not exhaust the ways a dominant platform can exclude rival platforms or rival users, but they do illustrate economic incentives and mechanisms that could lead to such reductions in competition.

II. ANTITRUST LAW AND POLICY

Antitrust law and policy seek to deter and remedy conduct that harms competition, including exclusionary conduct by dominant platforms. Such conduct can be reached by U.S. antitrust law if undertaken by agreement,8 if undertaken by a dominant firm (one with what the law terms “monopoly” power) or by a large firm with a dangerous probability of achieving monopolypower,9 if undertaken through exclusive dealing or tying in the sale of goods,10 or if undertaken through acquisition or merger.11

The evidentiary burdens of establishing competitive harm from exclusionary conduct can be demanding, however. Exclusionary unilateral conduct cannot be challenged under Section 1 of the Sherman Act, which requires proof of an agreement. If that conduct is undertaken by a firm with a share too low to prove monopoly power or dangerous probability of successful monopolization and direct proof is unavailable,12 the conduct cannot be challenged under Section 2 of the Sherman Act.13

Beyond satisfying the agreement prerequisite for Section 1 liability, or the monopoly power (or dangerous probability of success) prerequisite for Section 2 liability, the plaintiff must demonstrate that the exclusionary conduct harms competition.14 Yet, a variety of judicially created hurdles may impede doing so in meritorious cases. Courts have treated exclusionary nonprice vertical conduct as presumptively procompetitive, even in settings such as oligopoly markets and markets with dominant firms where it is well-established that vertical restraints can harm competition.15 In some cases, courts have declined to condemn exclusionary conduct that harms competition on balance if the conduct benefits competition in any way, or plausibly could do so, regardless of the magnitude of the competitive benefit.16 Importantly for dominant platforms, some commentators interpret the Supreme Court as suggesting that the prohibition on monopolization would not reach unilateral refusals to deal with a rival by a vertically integrated platform, that is, one that is also a supplier (or seller of a complementary product), unless the platform had previously supplied the rival.17 In order to adopt this suggestion as holding, however, the Court would need to overrule Lorain Journal18—a platform monopolization decision predicated on a unilateral refusal to deal that was later endorsed by both Robert Bork and the modern Supreme Court.19

The Supreme Court’s American Express decision may create additional hurdles for plaintiffs bringing meritorious exclusion cases against dominant platforms.20 It suggests that market definition is required, and direct evidence is insufficient for proving market power, in exclusionary vertical restraints cases (conduct involving an agreement between a firm and its suppliers or distributors).21 If this is how American Express is interpreted by lower courts, it may require fact-finders to analyze, for example, the extent to which different social media compete for attention, online advertisers compete with cable and print ads, or general-purpose online retailers compete with brick and mortar retailers or specialized online retailers–even when direct evidence would make it possible to demonstrate competitive harm or market power reliably without making an inference from market shares, and thus without reaching potentially difficult market definition questions. American Express may also require courts to analyze the competitive effects of conduct by transaction platforms within cluster markets encompassing end users on both sides22—which can create confusion when evaluating competitive harms.23

Beyond these legal issues, there are a number of practical impediments to bringing meritorious exclusion cases against dominant platforms. The most important problems impede challenges to the exclusion of nascent rivals and potential entrants. The antitrust laws reach such conduct,24 but it can be difficult for governmental or private plaintiffs to prove that nascent or potential rivals are a competitive threat, even when that is in fact the case, simply because those firms, by definition, lack a track record showing what they can do; the proof may end up turning more on capabilities than on past results. When exclusionary conduct deters potential rivals from even attempting entry, an antitrust case may be difficult to prove because it may be hard to tell whether the excluded firm is truly a potential entrant that could become a viable and effective competitor. These problems, particularly when exacerbated by judicial delays, mean that a range of damaging exclusionary conduct may not be deterred and that courts may be unable to restore competition (as by preserving the excluded firms).

In addition, foreclosed rivals, whether actual or potential competitors, may have little incentive themselves to challenge the exclusionary conduct of well-heeled platforms. Even where its case is strong, moreover, a rival may do better accepting a large financial settlement that leaves the platform’s monopoly power intact, rather than litigating to create competition.25

When a potential entrant is acquired, it can also be difficult to show that competition is harmed. Courts now require that the plaintiff, which is usually a government agency, show that the potential entrant would have otherwise entered the market rapidly and been viable, and that there are few other likely potential entrants.26 Evidence of competitive harm may be hard to come by because a potential entrant that has been acquired for a high price would have little incentive to support the government’s challenge.

Meritorious exclusion cases against dominant platforms are also impeded by the erroneous assumptions that some courts accept, at times encouraged by defendants and non-interventionist commentators.27 Some erroneous assumptions are about markets. It is wrong to suppose, as a general rule, that monopolies lead to more innovation than competitive markets, that forcing a monopoly platform to admit rival users will reduce innovation by both the monopolist and its rivals, that the exercise of market power rapidly self-corrects through entry, or that business practices prevalent in competitive markets, such as vertical restraints, are unlikely to harm competition when employed in oligopoly markets or markets with a dominant firm.

Other erroneous assumptions are about courts. It is also wrong to suppose, in general, that courts cannot tell whether exclusionary conduct harms competition or promotes it, that erroneous judicial precedents are more durable than the exercise of market power, or that the litigation process is manipulated by complaining competitors.

#### The impact of that behavior is magnified particularly by two factors:

#### 1. Data---the excessive monopolization causes pervasive exclusion.

Michael L. Katz 19, Sarin Chair, Strategy and Leadership, University of California, Berkeley's Haas School of Business, "Multisided Platforms, Big Data, and a Little Antitrust Policy," Review of Industrial Organization, Vol. 54, 2019, Springer.

The nature of user data has several broad implications. First, if user data are commercially valuable, lack substitutes, and are not shared across platforms, then the existence of significant increasing returns in collecting and utilizing user data can limit the number of viable competitors and create a “data barrier to entry,” especially when the accumulation of the necessary data takes considerable time.9 The resulting levels of industry concentration raise the possibility that platforms will have substantial market power and that their conduct can raise antitrust concerns.10 Indeed, some people are concerned that big data will create unlimited advantages of scale and scope that will lead to the domination of a wide swath of the economy by a handful of frms.11 \*\*\*FOOTNOTE BEGINS\*\*\* Khan (2017, p. 792) expresses this concern with user transaction data. It should be noted that, although certain transaction data may be very broadly useful, it may also be the case that, the more widely given data can be used, the greater the range of alternative user transactions that can serve as substitute sources of data. Moreover, there may be diminishing marginal returns to the sizes of datasets: At some point additional data may lead to little improvement in the performance of the algorithms that are based on those data. \*\*\*FOOTNOTE ENDS\*\*\*

Second, to the extent that user data lack substitutes and are important to a platform’s success, the possibility arises that a platform may engage in exclusionary conduct that is intended to weaken rivals’ ability to compete by limiting their access to user data or making that access more costly.12 The desire to raise rivals’ costs could motivate a wide range of conduct, including: refusing to sell data to rivals (or doing so only at elevated prices intended to raise rivals’ costs); entering into exclusive contracts with third-party data providers; or creating obstacles to user data portability (e.g., by storing data in proprietary formats or denying users control of data about them). The desire to weaken rivals could also motivate predatory behavior, whereby a platform seeks to prevent rival platforms from attracting users and sales that would otherwise generate data and strengthen the rivals’ abilities to compete.

Third, when user data are an important asset, they can be a central part of analyzing the competitive effects and/or efficiencies of a merger. In many respects, the issues that are posed are standard ones for merger policy. However, user data raise at least three issues that are somewhat novel or may arise with particular force. First, to the extent that particular datasets lack substitutes, a platform might use a merger to obtain data in order either: (a) to use those data to compete more effectively; or (b) to preempt rivals from obtaining data that would allow them to compete more effectively. Second, the role of user data may suggest reasons to consider potential entry arguments more seriously and broadly than is typical. Third, because it may be possible to share user data and because the value of a given dataset could decay rapidly, there are issues in designing remedies that are specific to user data.

Last, some of the possible uses of user data raise issues regarding price discrimination and user privacy. The latter set of issues is of particular interest. There are important questions regarding both: (a) the role of antitrust enforcement in promoting the use of efficient privacy protections; and (b) the effects that public policies that are intended to promote privacy have on platform competition and the realization of the goals of antitrust enforcement.

2 Raising Rivals’ Costs

I first examine the possibility of exclusionary conduct: If there are no good substitutes for a particular dataset that is important to a platform’s success, then a platform that controls access to that dataset may attempt to limit rivals’ access to it (or make that access more costly) in order to weaken their abilities to compete. This conduct could include refusals to sell data to rivals at reasonable prices, exclusive contracts with third-party data providers, or actions to create barriers to user data portability.

#### 2. Self-preferencing---it downgrades the ability to compete on dominant platforms.

Daniel A. Hanley 21, Policy Analyst, Open Markets Institute, "How Self-Preferencing Can Violate Section 2 of the Sherman Act," CPI Antitrust Chronicle, June 2021, pg. 4.

By unfairly modifying its operations to privilege its, another firm’s, or a set of firms’ products or services, self-preferencing enables a firm to unilaterally distort the relationships between dependent firms and customers to monopolize a market, fortify its dominance, destroy a competitor, or leverage into a new market. Self-preferencing can thus violate the Sherman Act and violate the principles of fair competition embedded in it.

Self-preferencing is not a novel behavior, but that does not put it outside the protections afforded by the Sherman Act.13 For example, the concern that a dominant technology company would use its infrastructure to sustain its dominance, leverage into new markets, and give favorable terms to some companies was a primary concern of the Department of Justice when it initiated its lawsuit that led to the breakup of AT&T in 1982.14 Other more modern examples of self-preferencing include manipulating search rankings to give a company’s own products or services an artificial boost or giving favorable search rankings for a selected few companies while blocking off access to such terms for others to monopolize an industry.15

Self-preferencing causes two primary harms to market participants and consumers. First, since self-preferencing artificially weakens a rival firm’s competitive position (who is often dependent on the provided service), it allows the perpetrator to unfairly maintain and extend its market power. When this happens, barriers to entry in an industry can increase, leading to less consumer choice, increased bargaining leverage of incumbent firms to extract or impose more favorable terms of service and conduct on dependent firms, and increased costs to dependent firms.

Second, self-preferencing causes significant exclusion and foreclosure effects, which can lessen consumer choice for alternative services. The exclusion of a firm can also cause consumers to lose out on the benefits of increased firm rivalry and potential innovation derived from it.16

The foreclosure effects caused by self-preferencing can also deprive a firm of the necessary scale to be a viable market participant.17 Moreover, even the threat of foreclosure can cause harm to consumers by deterring the entry of potential competitors since they will likely not risk entering a market that they can be unilaterally excluded from if they start challenging the dominant incumbent firm.18

#### Studies confirm both that exclusionary conduct harms innovation AND antitrust is critical resolve it.

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The big tech firms supposedly have an inconsistent attitude toward the third parties that sell on their platforms. On the one hand, they welcome these sellers because a broad array of complementary products enhances the value of their platforms.64 On the other hand, they deliberately undermine some of them when they enter a complementary market.

The critics charge that the tech giants suppress third party rivals in three main ways. First, when the platforms conduct searches for users, they allegedly bias the results, artificially downgrading third party products and elevating their own. This distortion reduces the visibility of rival products, depriving them of sales and narrowing consumer choice. Second, they allegedly use the nonpublic data they collect on individual third parties to determine which products are most popular and then offer the same products at lower prices. This targeted copying devastates the business of the third parties and undermines their incentive to develop new products. Third, the tech giants sometimes refuse to deal with third parties simply because they are competitors. For example, Amazon may agree with a branded product seller that Amazon will carry its brand – and only its brand – in a particular product category. After committing to exclusivity, Amazon allegedly removes competing sellers from its platform, curtailing consumer choice.65 Third parties cannot avoid the resulting harm because, they say, no good substitute for Amazon.com exists.66 \*\*\*FOOTNOTE BEGINS\*\*\* See, e.g., Mattioli, supra note 62 (“Because 39% of U.S. online shopping occurs on Amazon, according to research firm eMarketer, many brands feel they can’t afford not to sell on the platform.). \*\*\*FOOTNOTE ENDS\*\*\*

The following sections analyze each of these allegations, asking not only whether the asserted conduct has injured competitors but whether it has harmed consumers and whether it has resulted in monopoly power or a dangerous probability of monopoly power.

A. Biasing Search Results

Google, Amazon, and Apple have all been accused of search bias. Google’s behavior produced a major fine in Europe but, despite an extensive FTC investigation, no action in the United States. Recently, The Wall Street Journal uncovered evidence that Google had distorted the results of searches for videos to favor its own affiliate, YouTube. Other newspaper reports contain evidence of search bias by Amazon and Apple. True search bias would not be justified, since it would alter the priority of search results based on what contributes most to platform profits, not what best serves consumers. But while true search bias would be anticompetitive, there is little or no evidence, to my knowledge, that it resulted in actual or probably monopoly power.

1. Google

Federal authorities in both Europe and the United States have investigated Google for search bias. In 2017, the European Commission (EC) concluded that Google had altered its search results so that its comparison shopping service, Google Shopping, was generally placed ahead of competing services.67 Ruling that this conduct constituted an abuse of dominance, the EC fined Google €2.42 billion.68 Google had plainly redesigned its search algorithm to favor its own products. In 2007 it unveiled Universal Search, a new algorithm that gave “particular prominence to Google’s products.”69 Indeed, Universal Search placed Google Shopping “at or near the top of search results for comparative shopping services.”70 The issue was whether this priority was justified. The EC found that it was not, 71 and thus injured consumers as well as competitors.

The EC did not conclude, however, that Google’s search bias resulted in monopoly power. While Google does not charge consumers for searches or complementary services, it does charge advertisers to place messages on these products. The EC did not find, though, that Google’s new search design resulted in higher advertising rates. Although the new design reduced, often severely, the sales of rival products,72 the EC did not rule that it enabled Google to elevate its ad rates to monopoly levels. Advertisers apparently had other choices. 73

In the U.S., the FTC investigated Google’s new search algorithm but decided not to issue a complaint. Although its staff wanted to challenge some aspects of Google’s behavior, they did not recommend a complaint with respect to its search engine. 74 Like the EC, the FTC found that the sites Google downgraded lost significant traffic, but it did not conclude that Google gained monopoly power.75 Moreover, unlike the EC, it decided that Google’s new algorithm was justified. Richard Gilbert, an economist who consulted for the FTC, explained why: Universal Search produced a greater diversity of websites on the first results page and consumer responses indicated that they preferred that. 76 In short, the Commission found that Google’s new algorithm did not bias its search results; it enhanced them.77

In contrast, just last year a Wall Street Journal investigation concluded that Google had engaged in a different type of search bias: “When choosing the best video clips to promote from around the web, Alphabet Inc.’s Google gives a secret advantage to one source in particular: itself. Or, more specifically, its giant online-video service, YouTube.”78 The Wall Street Journal found that Google systematically favored YouTube in its search results even when competitors like Facebook Watch and Amazon’s Twitch carried the same or similar videos and even when the number of their views or followers was greater. 79 Google denied that it engaged in self-preferencing but did not offer an explanation for the results. 80 The Wall Street Journal’s sources maintained that Google wanted to drive traffic its way and increase its bargaining leverage with content providers, 81 reasons that hardly justify the change.

This report, in short, strongly suggests search bias, just like the reports on Amazon that follow. The House Antitrust Subcommittee Report presented additional evidence of self-preferencing, suggesting that Google continues to place its services above competing sites even when its ranking algorithm would not warrant that priority.82 None of these accounts, however, contains evidence of actual or probable monopolization.

2. Amazon

ProPublica found that Amazon’s search algorithm ranked Amazon’s products and products that use Amazon’s fulfillment services above rival products. Because placement matters so much, ProPublica concluded that this bias gave the favored products an “oft-decisive advantage.”83 A Wall Street Journal investigation uncovered another form of distortion. According to Amazon insiders, the platform altered its search algorithm so that it gives priority to products that are more profitable for Amazon. The new algorithm does not use profitability directly – Amazon’s lawyers barred that – but it employs proxies for profitability.84

Both reports indicate that Amazon has been skewing its search results to increase its net income. The reports do not analyze Amazon’s actual search algorithm; they rely on Amazon employees who are familiar with it. But if the insiders’ testimony is accurate, it indicates that Amazon has elevated its own interests above those of consumers.

Amazon’s choices, whether justified or not, do not appear to have led to monopoly power or a dangerous probability of monopoly power. The Journal report, for example, presents no evidence that Amazon has monopolized, or was about to monopolize, any relevant market. Ramsi Woodcock notes that this is a general problem with criticism of Amazon: “Critics appear not to have pointed to any evidence that Amazon has power in the individual markets for the thousands of products that appear for sale on Amazon’s website.”85 eMarketer data is consistent. It shows that Amazon’s market share of virtually every product category is small. For instance, its share of Home and Kitchen products is 11.1%, its share of Sports and Outdoor products is 5.7%, and its share of Baby products is 2.6%. The only exception is Clothing, Shoes, and Jewelry products, where Amazon’s market share is 47.7%. 86 This data is imperfect, however, because it calculates market shares based on the number of brands in a category, not total sales.87 \*\*\*FOOTNOTE BEGINS\*\*\* See id. Thus, if a single Amazon brand had much larger sales than a similar third party brand, these data would not reveal it. They would indicate that Amazon’s share and the third party’s share were the same. \*\*\*FOOTNOTE ENDS\*\*\* Yet it supports the notion that Amazon’s entry into complementary product markets has rarely, if ever, generated actual or probable monopoly power. If Amazon has been distorting search results, few if any antitrust plaintiffs could turn to the Sherman Act for relief.

3. Apple

A New York Times investigation suggested that Apple has also been biasing search results. A data analysis firm retained by the Times found that “for more than a year, the top results of many common searches in the iPhone App Store were packed with the company’s own apps. That was the case even when the Apple apps were less relevant and less popular than ones from its competitors.”88 Here, however, search bias may not have been the culprit. Two senior Apple executives acknowledged the results but maintained that they reflected the merits of Apple’s products, not deliberate distortion. The executives stated that “the company did not manually alter search results to benefit itself. Instead, they said, Apple apps generally rank higher than competitors because of their popularity and because their generic names are often a close match to broad search terms.”89 In any event, “the company had since adjusted the algorithm so that fewer of its own apps appeared at the top of search results.”90

This account is puzzling. If Apple’s original search algorithm served consumers, why was Apple was so willing to change it? Whatever the answer, the Times report contained no evidence that either the original or the revised algorithm enabled Apple to monopolize a market.

In sum, there is reason to believe that three tech giants (Google, Amazon, and Apple) have displayed search rankings that artificially favor their own products. In each case, the evidence of distortion emerged from internal sources rather than deconstruction of their search algorithms. Yet this is likely to be the only practical method of demonstrating search bias in most instances. In two cases (Google and Amazon), the companies offered no justification. In no case was there evidence that the alleged bias led to actual or probable monopoly power. Together, these two conclusions – apparent anticompetitive conduct but no dangerous probability of monopoly power – support extending the reach of the Sherman Act.

B. Copying Rival Products

Critics also charge that the tech firms routinely undercut third parties that sell on their platforms by copying their most popular products.91 They allegedly identify those products by examining the confidential data they collect on individual third parties. In other words, they use nonpublic information about specific sellers to free ride on their product ideas, depriving them of business and undermining their incentive to develop new products.92 The tech firms compound the damage when they offer their own products at lower prices.93 Even the possibility of this behavior may limit the funding available to start-ups.94 Further, the threat of copying a rival’s product can make it easier to acquire the rival at a bargain price.95

Press reports suggest that both Amazon and Apple have mimicked third party products offered on their platforms. A 2014 study found that when Amazon first offered private label women’s clothing, its list of products included “25 percent of the top items first sold through [Amazon Marketplace] vendors.”96 Six years later, The Wall Street Journal interviewed Amazon employees who admitted they studied the sales data of specific third parties to determine which private label products to offer.97 Although Amazon had prohibited this conduct, 98 the employees said they ignored the rules or found ways around them. They were willing to skirt the rules because the nonpublic data helped them determine “how to price an item, which features to copy or whether to enter a product segment based on its earning potential.”99 Likewise, several press investigations found that Apple had upgraded its apps with “the features of the most popular apps that other innovators built.”100

This practice has generated such adverse publicity and hostile Congressional reaction that Amazon made no attempt to defend it on the merits. To the contrary, in response to the Journal story, it reiterated that it prohibits its private label product teams from accessing individual seller data and announced it had opened an investigation. 101 Three months later, Amazon CEO Jeff Bezos told a congressional hearing that the investigation was continuing and that he could not “guarantee . . . that this policy has never been violated.”102 Amazon eventually responded that its prohibition had not in fact been ignored: only one employee had accessed third party data with respect to the products in question and the data was aggregated, not seller-specific.103

Despite the widespread concern with the practice, the antitrust analysis is complicated because copying a rival’s product can be procompetitive. Indeed, competition often works through copying. When an entrant copies a dominant firm’s product and offers it at a lower price, consumers benefit. Likewise, when Amazon enters a complementary product market, it matches the quality of the incumbents’ product but charges a lower delivered price, causing total market output to increase.104 Established firms study their markets to learn which of their rivals’ product improvements to adopt so they can compete more effectively.105 To be sure, intellectual property law often prohibits such mimicking in order to protect incentives to innovate, but here the third party products were not patented and their distinctive features were not trade secrets.

There is data on what happens when tech giants enter into complementary product markets. Two studies looked at Google’s entry into the sale of apps for its Android operating system.106 A third investigated Amazon’s entry into segments of the Amazon Marketplace.107 As expected, two of the studies found adverse effects on the number of products third-party sellers offered. According to one, Amazon’s entry increased the turnover of third-party products by six percentage points.108 According to another, Google’s entry reduced the total quantity of app upgrades in the targeted product space by 7.9%. 109 It also caused the developers in that space to increase the price of their apps by an average of 3.7%. 110

At the same time, all three studies found significant consumer benefits. Many consumers preferred the tech giants’ products, causing them to curtail their purchases of third party products. It is this loss of business that led third parties to reduce the number of products and product upgrades they offered. In Amazon’s case, consumers switched because of its lower prices. When Amazon moves into a product category, it matches the prices that third parties charge,111 but reduces shipping costs to zero, lowering delivered prices. 112 Consumers value this so much that they increase their total purchases in the product category. 113 This growth in output suggests that consumer satisfaction rose.114

In Google’s case, consumers switched because they preferred Google’s apps. As noted, one study found that the loss of business caused third parties to reduce the total number of app upgrades they offered in the targeted product category. But this study also found that an impending Google entry increased other aspects of product development. Third parties accelerated their upgrades of non-competing products by 4% and their development of new apps by 3-10%.115 Further, the most popular apps – those least likely to lose business to Google – responded to the threat of entry by increasing upgrades on competing apps by 7.8% and upgrades on other apps by 15%.116 Overall, innovation may have increased. The other study found that it did. Examining over six thousand apps, the authors concluded that Google’s entry into the photography space led to substantial growth in innovation. Apps affected by Google’s entry were 9.6% more likely to issue major updates than unaffected apps.117

In sum, the studies indicate that when a tech giant enters a complementary product market, the impact on consumers is mixed but generally beneficial. Many third parties do curtail product development, but when Amazon enters, it offers lower delivered prices and consumers increase their total purchases of the category. When Google enters, it offers apps that many consumers prefer, other third parties step up their development efforts, and total innovation may rise.

Given these countervailing effects, a blanket ban on copying rival products would be difficult to justify. Since Amazon’s entry increases total output and Google’s entry may well promote overall innovation, a blanket ban could easily reduce consumer welfare. A vertical break up would be even more difficult to justify, since it would prevent the tech giants from offering any complementary products, even those that involved no mimicking at all and thus no direct threat to third party innovation. 118

In one circumstance, however, it would make sense to prohibit a tech giant from copying a third party’s product. When a tech giant identifies the product by using nonpublic data about a specific third party, its copying poses a particularly direct threat to innovation. In that circumstance, no other firm is producing the product, so the third party is a pioneer, and allowing a tech giant to take a pioneering idea is especially likely to undercut innovation. In contrast, when a platform uses other information – public information about popular products119 or nonpublic information that is aggregated across multiple competitors120 – there is less danger that the platform will free ride on a single seller’s innovation. To be sure, no empirical studies address the issue – where to draw the line on tech giant product copying – and thus any choice is tentative. But the lack of empirical research is a problem with tech giant exclusion generally,121 and should not stop courts or Congress from making reasonable judgments. Accordingly, it seems desirable to bar platforms from using nonpublic data about a specific third party to decide which products to copy. This would prevent the worst instances of free riding while giving the tech giants considerable latitude to enter complementary markets with cheaper or better products.122 Enforcing this rule would require internal information, but the Wall Street Journal had no trouble obtaining such information from current Amazon employees.123

C. Refusing to Deal with Rivals

Critics have also charged the tech giants with a third form of exclusionary conduct – refusing to deal with certain firms simply because they are competitors. For instance, Amazon allegedly enters into exclusive distribution arrangements with suppliers that require it to remove competing suppliers from its platform. One of the neo-Brandeisians contends that these expulsions amount to “illegal monopolization.”124 But she does not identify any markets that Amazon has monopolized through these expulsions. 125 Moreover, when she explains why the suppliers want this exclusivity, the story she tells (if valid) is procompetitive. According to her account, the suppliers sell products that require customer service in physical stores. They also sometimes offer their products through third parties on the Amazon Marketplace. The third parties frequently discount their products, however, which causes free riding. Consumers visit the physical stores to take advantage of the in-store service but then purchase the products online. To prevent this free riding, the brands make Amazon their exclusive online outlet. 126

In this account, in short, exclusivity is a response to a market failure.127 The account may be incorrect, but there is no evidence, to my knowledge, that Amazon expels third parties in order to gain monopoly power in a third party product market and then raise prices or depreciate product quality. Moreover, if Amazon had actually entered into exclusivity agreements, the problem could be dealt with under Section 1 of the Sherman Act, which does not require monopoly power.

There are also allegations of naked exclusion – refusals to deal with a firm solely because it as a competitor. In 2016 Apple allegedly blocked Spotify from access to the App Store simply because it posed a threat to Apple Music.128 Apple denies this, 129 and in any event, the exclusion was temporary. Spotify returned and consumer choice was restored. More serious allegations of exclusion are leveled in the FTC and state complaints against Facebook. 130 They claim that Facebook denied access to its APIs to app developers that competed with it or helped others compete with it. Specifically, Facebook adopted a policy that barred apps that replicated a “core functionality” of Facebook or linked to competing social networks.131 These refusals to deal were allegedly so effective that they deterred any direct challenge to Facebook’s platform, 132 thereby maintaining Facebook’s monopoly power. The complaints cite little evidence, however, that any of the affected apps would have developed into a competing social network. On the other hand, Facebook has not, to my knowledge, offered a justification for its refusals to deal, suggesting that its goal was indeed to reduce competition. Facebook simply asserts that it no longer engages in the practice.133

Epic Games has also accused Apple and Google of refusing to deal. Both tech giants removed one of Epic’s most popular games, Fortnite, from their app stores because Epic would not pay their standard commissions (30% of revenue) on in-game purchases.134 According to Epic, Apple and Google can charge such high commissions only because they make it difficult or impossible to obtain apps except through their app stores. As a result of this exclusionary policy, Apple is the monopoly supplier of apps for Apple phones and Google is virtually the sole suppliers of apps for Android phones.

Apple claims that this exclusivity is justified because Apple can thereby provide better safety, security, and other services to app users, and that its high commissions reflect the costs of furnishing those services. 135 But if that were true, Apple’s costs of operating the App Store would have to be $15-17 billion a year, 136 which is unlikely.137 Moreover, even if Apple’s costs were that high, the fundamental issue is whether its exclusionary conduct is justified. If consumers could obtain safe and secure apps from other sources, competition would increase and Apple’s commissions – and its costs – would be forced down. Many other platforms allow users to procure apps from other sources.138

D. Conclusion

The contours of unjustified exclusion are clear. When a tech giant uses its own profitability rather than the preferences of its customers to rank search results, it distorts consumer choice. When a platform uses the confidential data it gathers on individual third parties to identify their most popular products and then duplicates them, it is likely to reduce innovation. When a tech firm refuses to deal with a competitor simply because it is a competitor, it increases the platform’s market power and diminishes the options available to consumers.

All the tech giants appear to have used one or more these exclusionary tactics. The extent of their conduct will become clearer as ongoing proceedings unfold, but at this point it seems that all the tech giants have sometimes suppressed competition in complementary markets through unwarranted exclusion. At the same time, there is no evidence, to my knowledge, that this behavior led to monopoly power or a dangerous probability of monopoly power in any of these markets. The question, then, is how to deter it. Congress could break up the tech giants, which would diminish their ability and incentive to exclude. Or it could make the conduct itself illegal by amending the Sherman Act.

#### A concerted cycle of innovation in the technology sector sustains the US edge over China---failure causes conflict through cyberspace AND within numerous hotspots. BUT it’s not solely about the strength of the military ---the health of overall growth sustains vital US posture.

Karina Verónica Val Sánchez & Nezir Akyesilmen 21, Selcuk University-Konya, "Competition for High Politics in Cyberspace: Technological Conflicts Between China and the USA," Polish Political Science Yearbook, Vol. 50, Issue 1, 2021, pg. 46-63.

For many decades, the United States used its superiority in science and technology to ensure its hegemony, but today these powers also want to exploit it and bring about a shift in the balance of power. In this respect, Drezner (2001, p. 4) argues that “countries acquire hegemonic status because they are the first to develop a cluster of technologies in leading sectors” innovations impact the domestic economy and then impact internationally. When the hegemonic power slows down its innovation rate, it enters a period of struggle with the fast follower powers until a new ‘technological hegemons’ is found. In addition, the dominant power fears that “the other superpower might achieve a significant technological breakthrough and seek to exploit it” (Gilpin, 1988, p. 162). Taken together, these contributions suggest that the hegemonic power needs to maintain an advantage and superiority technologically against the powers that challenge its dominant position; otherwise, its position may be jeopardized (Deutch, 2018).

Lim and Kennedy’s work focuses particularly on analyzing the interaction between great powers, mainly on how technology and innovation create a rivalry between the dominant state and the rising power (Kennedy & Lim, 2018, pp. 553-572). Economic superiority is one of several elements that drive the rise of ascending power. Yet, in the long run, economic development is maintained through technological innovation, which “generate spillover effects to the rest of the lead economy and then to the global economy” (Drezner, 2001). The innovation imperative is when the rising power tries to acquire or create new technology to ensure its rise. In the process, it develops strategies and policies to acquire and develop technologies, but especially increases spending on research and development (Kennedy & Lim, 2018).

As a rising power, China needs to create new products and get new technology (Reuveny & Thompson, 2001). There are three ways in which technology is acquired: making, taking, and transacting. Taking involves non-transactional means. Making is the result of supporting local producers in creating new ones. Transacting is a commercial exchange of technology (Kennedy & Lim, 2018, pp. 556-557). In this sense, it is necessary to mention that China has no complex about the idea of copying inventions, products, or technologies in order to benefit from technological advances quickly (Lee, 2018, pp. 29-55). The United States has also highlighted the successful and constant attempts by Chinese hackers to access the American network in search of possible technological secrets (Segal, 2016, pp. 119-122). Some have even commented that Chinese military equipment is very similar to that of the United States (Segal, 2016, p. 120).

China and the United States are the world’s largest investors in research and development (R&D). However, the American model of innovation is subordinated to federal support, so it is alarming that in recent years federal support for R&D has declined and especially at a time of global competition where it is estimated that by 2030 China will be the country that invests the most in R&D (McRaven, 2019, 5) surpassing the US An insightful report by the Council on Foreign Relations (CFR) recommends that the US government should increase funding from 0.7% to 1.1% of gross domestic product (GDP) annually (McRaven, 2019: 6) so that the US does not lose its technological advantage and has a greater involvement as the private sector is currently at the forefront (Glosserman, 2020).

The actions of the ascending power unleash two types of effects concerning the dominant power: which firstly experiences a threat to its national security (security externalities) and subsequently to its position in the international system (order externalities) (Kennedy & Lim, 2018, pp. 553-555). As mentioned in the first part, the US NDS states that China is a threat to the current order of the international system (order externalities) (Mattis, 2018, p. 2). Also, China’s ambitions to access emerging technologies with military applications are also perceived as a threat to US national security (security externalities). China wants to catch up with the United States in military technology and eventually overcome it (Mori, 2018, p. 2). Both the United States and China compete to dominate militarily exclusive breakthrough technology because it could shape next-generation military capabilities (Mori, 2018, p. 22).

The growing techno-rivalry has motivated both powers to adopt a techno-nationalist approach to maximize their national power. As China’s supreme leader, Xi Jinping is convinced that the technological backwardness experienced in the past as a nation is rooted not in the lack of knowledge but the lack of its application for social and economic development (Xi, 2014). That is why he has focused on removing institutional barriers “to unleash to the greatest extent the huge potential of science and technology as the primary productive force” (Xi, 2014). Xi also stated the urgency of seizing the moment to take advantage of technology “I have repeatedly said that the great rejuvenation of the Chinese nation can in no way be realized easily. In fact, the stronger we become, the greater resistance and pressure we will encounter. That is why we say that timing and resolution are vital, as historical opportunities are often ephemeral. Now we have an important historic opportunity to promote scientific and technological innovation. We must not miss it, but seize it tightly” (Xi, 2014).

Xi Jinping is sure that a nation with technological inferiority is catastrophic for the total fulfillment of the Chinese dream (Paul, 2020). That is why he is working on initiatives that will lead the nation towards the fulfillment of that dream and to realize the Two Centenary Goals (Xi, 2014), namely ‘Belt and Road Initiative’ and ‘Made in China 2025’.

A) ‘Belt and Road Initiative’ (BRI)

It was 2,100 years ago, during the Han Dynasty when the silk road began. However, it was not until 2013 that Jinping presented a modern route: Silk Road Economic Belt and the 21st Century Maritime Silk Road. A first glance suggests that it is a route connecting China to the rest of the world (more than 60 countries), but in fact, it is a broader proposal that involves many variables aligned to achieve long-term interest (Yunling, 2015). According to Jinping, One Belt and One Road (OBOR) “represent paths towards mutual benefit which will bring about closer economic integration among the countries involved, promote the development of their infrastructure and institutional innovation, create new economic and employment growth areas, and enhance their capacity to achieve endogenous growth and to protect themselves against risks.” (Xi, 2014, p. 339).

B) Made in China 2025 (MIC2025)

Since its proposal in 2015, MIC2025 represents China’s industrial policies for the next decade. The central axis is China’s transformation into a global technology power (Chen et al., 2020). Hence, it is necessary to integrate advanced manufacturing techniques into the manufacturing industry. This sector is one of the largest in the world and faces serious problems of technology and innovation; therefore, there are many backward industries. MIC2025 seeks to mitigate these deficiencies through a megaproject approach (Lin, 2020). Also, MIC2025 sketches out a three-step strategy to upgrade the Chinese manufacturing industry towards an “industry 4.0” 1) innovation and efficient manufacturing processes to achieve industrialization by 2025. 2) China should be at the level of the manufacturing base of developed countries to compete with them by 20235. 3) China will be a manufacturing superpower. For the latter strategy, MIC2025 establishes clear principles, goals, instruments, and specific industries (Cheung et al., 2016). For instance, it has five sub-plans aimed at facilitating government participation: Manufacturing innovation center construction plan, Intelligent manufacturing plan, Core industrial capability strengthening plan, Green manufacturing plan, High-end equipment innovation plan. Also, it stresses ten priorities industrial areas among them agricultural equipment, aerospace, biomedical, railway, marine engineering and ships, new energies, new materials, power generation equipment, and of course automated machine tools and robotics and the new generation of information and communication technology (ICT), which will focus on three main technological areas: microchips and related hardware, information and communication devices, and industrial processing systems and software. These last two industrial priorities are particularly relevant to technological competition.

Can the United States deter Beijing’s techno-nationalist ambitions? It depends on the seriousness of the Chinese challenge (Bey, 2018, p. 33). China is strongly responding to an innovation imperative as a rising power, putting forward strategies and plans to be able to obtain, make and take technologies (Kennedy & Lim, 2018). MIC2025 is the route the Chinese government has set out to achieve “self-sufficiency” and become a “manufacturing superpower” (Laskai, 2018b). As expected, this plan has been highly criticized by the US government. If China continues its technological push as it has so far, US superiority will likely extend for another decade until it is finally surpassed (Rasser, 2020).

Nature of the Conflict: Low or High Politics?

The Donald Trump administration has published two documents highlighting the international scenario that the United States is facing and the necessary actions to be taken. The first document is the 2017 National Defense Strategy (NDS) and 2018 National Security Strategy (NSS). In these documents is possible to identify a particularity that articulates both strategies: the return of great power competition (Trump, 2017, p. 27). The United States is involved in a great-power competition with China and Russia, and today it is the biggest national security threat they have to face (Mattis, 2018, p. 1), displacing the threat of terrorism into the background. Strategic competition is the best way to avoid large-scale conflicts (Blankenship & Denison, 2019, pp. 43-44), and to face this competition, it is necessary to maintain political, economic, military, and technological advantages (Trump, 2017, p. 3), because “every domain is contested—air, land, sea, space, and cyberspace” (Grieco, 2018, p. 3). Swaine (2018, p. 55) argues that the Chinese authorities very badly received these documents because the US “ignore Beijing’s supposedly cooperative, win-win approach and peaceful intentions” (Swaine, 2018, p. 55).

The NDS (2017) and the NSS (2018) are major shifts in US foreign policy. Distinguishing it diametrically from the foreign policy that the Obama administration had towards Russia, but especially towards China “shifting from an engagement-based approach toward a competition-based one” (Mori, 2019, p. 77). This change in approach is mainly motivated by the prolonged and failed US strategy towards China (Friedberg, 2018, pp. 15-17).

These documents serve as policy guidance for specific US national security and defense priorities. In both documents, Beijing represents a competitor and a threat to US prosperity and security. In this sense, following a competition-based approach, it is possible to identify three shifts towards China under the Trump administration:

First, the US government has begun to operate in a very coordinated way to address the unfair acts of Beijing, namely forced technology transfer, intellectual property theft, cyberespionage, cyber-theft, market access, and the large trade imbalance in China’s favor (Lau, 2020, pp. 32-34). For instance, the United States, through the Committee on Foreign Investment in the United States (CFIUS), has prevented investment in American technology companies by the Chinese venture capital firm. The power granted to this Committee by the Foreign Investment Risk Review Modernization Act (FIRRMA) is that it is even allowed to directly block potential purchases and investigate foreign entities. One of the most notorious cases is the blockade that the CFIUS made to prevent the purchase of US Lattice Semiconductor, which produces chips for the development of artificial intelligence technology (Hoadley & Lucas, 2018, p. 11). According to the White House, the purchase was blocked because its sale carries a national security risk due to Beijing’s support for the operation (Johnson, 2019a, p. 10).

Second, the United States Congress has also done its part by actively participating in the approval of several legislation limiting China. The approval of the 2019 National Defense Authorization Act (NDAA2019) allowed the increase in the Department of Defense budget. The defense spending budget increases to meet the expenses involved in modernizing the US military and maintaining military preeminence and forward-based presence. The Department of Defense has shown special attention to the need to incorporate new technologies – “big data”, artificial intelligence, quantum technology, 5G, and robotics to ensure the US military’s technological advantage and compete with China.

Third, the issues addressed by the present administration are more varied and more politically sensitive, denouncing human rights violations within China, supporting the movement “Occupy Central” in Hong Kong (Jisi & Ran, 2019, p. 3), and expressing intentions for greater political participation in areas under political tension such as Taiwan and Tibet (Sutter, 2017, pp. 70-71).

As discussed above, relations between China and the US have shifted towards a more competitive relationship. At least two broad types of competitions appear to be taking place between the United States and China. First, the dispute is mainly about being first in emerging technologies with military use. The country that achieves the most militarily relevant innovations will be the one that obtains the largest benefits (Barnes & Chin, 2018). It is estimated that the new generation of technologies will ensure military superiority, information superiority, and economic superiority (Allen & Chan, 2017). Artificial intelligence has raised several alarms in matters of national security because on the battlefield, it provides speed and lethality. It also opens vulnerabilities to strategic nuclear stability (Fitzpatrick, 2019). Both countries have prioritized the development of AI technology. China has gone one step further, projecting that by 2030 to dominate the field of AI.

The Sino-American rivalry is not only commercial but also encompasses different dimensions. It should only be noted that after the tariff measures taken by the US in 2019, immediately after the attacks on Chinese technology companies began. The Trump administration prohibited US agencies from acquiring Huawei and ZTE equipment, and imposed greater restrictions on technology exports, put up stiff resistance to the adoption of Huawei’s 5G technology at the same time that discouraged allies from allowing this technology into their countries. Allies, such as Australia, New Zealand, and Japan, followed the American instructions. In 2012, US House Permanent Select Committee on Intelligence report indicated Huawei as a company that represents a risk to the security of citizens because of dubious handling of information on devices and suspicions of a backdoor that allows them to collect information, functioning as a means of cyberespionage (Heinl, 2017, p. 140) and also a threat in the military sphere due to the company’s relationship with the People’s Liberation Army of China (PLA) (NO, 2017, p. 3). However, the accusations stated by the US have been rejected by Huawei company, and to add evidence to their statement, Huawei has allowed the equipment they produce to be examined by experts from Government Communications Headquarters (GCHQ) in search of malicious software or backdoors and so far they have not found anything wrong (Inkster, 2019, p. 109).

The international market positioning of Chinese companies is becoming more and more noticeable. Now more than ever before, China is competing more closely in the creation of advanced technologies, so one of the US priorities is to discourage the pace at which Beijing advances in technology development (Inkster, 2019, p. 109) for national security and commercial reasons (Lau, 2020, p. 22). The trade war is only one manifestation of the real competition in technology (Chen et al., 2019, p. 5; Lau, 2020, p. 19). The US attempts to counter China’s efforts to become technological leadership and maintain its position as a dominant power by driving the world into a cold war over technology.

Second, a geopolitical rivalry for dominance in third states occurs on at least three dimensions: “maritime competition, competition for infrastructure funding, and competition for the digital network” (Mori, 2019, p. 81). To counter the “Made in China 2025” plan and China’s “Belt and Road Initiative”, the United States has pushed the “Free and Open Indo- Pacific Strategy” (FOIP) (Jisi & Ran, 2019, p. 3). The strategy includes Australia, France, India, Indonesia, Japan, and the United States. The central idea is to transform the Indo-Pacific region into broader regional cooperation by thinking of the region as one maritime zone. Economic, military, maritime, and foreign policy aspects are discussed to achieve it (Scott, 2019). The United States has shared interests with Japan and Taiwan. Japan, which is at the juncture of deciding whether to counter or support China’s rapid growth (Hosoya, 2019), and of course Taiwan, whose close relationship with the United States has raised concerns in mainland China (Auslin, 2018). However, both countries are experiencing a growing maritime pressure of The People’s Republic of China (PRC) as a threat to their security (Scott, 2019, p. 49), and FOIP would help them decrease the tension with China by having the United States as an allied. The projects developed by China in recent years are interpreted as an indication that China is seeking greater global projection with geostrategic repercussions, for instance, the digital Silk Road (Vila Seoane, 2020), the Maritime Silk Road Initiative (MSRI), and the Silk Road Economic Belt (SREB) are projects with geopolitical impact (Blanchard & Flint, 2017). Jisi (2014) is of the opposite opinion. It considers a “march westwards” strategy, that is to say, the creation of multilateral relations with countries located in the west by China can benefit the relationship with the United States because it functions as a “rebalancing” that would avoid a confrontation at sea or on Chinese territory. In this sense, the mentioned proposals should not be interpreted as China’s expanding global influence (Jisi, 2020) but rather as a “rebalancing” for more balanced Sino-US relations.

The US has a special interest in maintaining regional access to Asia to counteract China’s influence. Its main strategy is to form strong alliances, such as the partnership with India (Parameswaran, 2018). However, the Trump administration has not been efficient in making allies; on the contrary, it repels them by initiating trade wars with partners and adversaries (Blankenship & Denison, 2019, pp. 51-52). In addition to the projects China is carrying out in the region and which, given their scope, extend beyond the region, it is gaining influence through economic and political involvement with different organizations such as the Association of Southeast Asian Nations (ASEAN) (Noguchi, 2011, p. 76). It also aspires to become a maritime power to “ensure access to energy resources, foreign trade, and direct investment, but also to guarantee its protection against possible external threats” (Noguchi, 2011, p. 66). The reaction of other nations to the Chinese nation with a greater global presence can impact their domestic development and their participation in the international sphere. However, the international community’s correct interpretation of China’s aspirations and values as it seeks its place in the international order will be important in shaping its relationship with the Western powers in the long run (Jisi, 2011).

There are at least three motives why Washington chose to follow a competition-based approach to China now and not before. First, the growing perception within the United States that a relationship based on engagement in the common interest has left them with few benefits, and conversely, China has taken advantage of this situation. As an example, the constant infringement of property rights and espionage for economic purposes. Second, the American business community has expressed its discontent with the unfair competition they face within China and on US soil from Chinese competition. Third, the US sees the potential in China to interfere in domestic politics and influence societal opinion, including using devices to extract data from citizens (Mori, 2019, pp. 79-80).

The following sections outline how technological competition is developing in three ways: cyberspace, military technology, and artificial intelligence.

Cyberspace: A Battlefield for the US and China Rivalry

Cyberspace has become a contested domain, a critical battleground for the United States and China. In the last decade, the increase of cyber interactions in this domain provides us with enough information to analyze the motivation for competition between these two powerful states. As a matter of fact, both countries have ambitions for wide-ranging and rapid military modernization implementing new technologies and cyber capabilities. China has consistently focused on modernizing its military forces and developing military capabilities. Firstly, to maintain its regional dominance in the South China Sea, a region in constant dispute, and secondly to be able to cope with the US military power. Also, China competes for military dominance motivated by a desire for survival that goes beyond sovereignty and territorial integrity but is expressed in terms of keeping their resources and interests intact, so military competition is necessary for their survival.

Military superiority is one of the elements that have kept the United States as a hegemonic power. Therefore, China’s actions have not gone unnoticed within the US defense and security community, and it has started to see a potential military rival in China, largely because there are many doubts regarding its capabilities and intentions. The motivations of both powers are leading us towards a direct military competition. The American government is motivated to be the leader in developing new and more sophisticated military technologies to maintain defensive military superiority but, above all, offensive to deter rivals while maintaining its global influence. For the United States, survival is one of the vital motivations to compete because within an anarchic international system, there are attempts to challenge its hegemonic role.

The PRC has begun to compete against the United States for military superiority, mostly through cyber capabilities for warfare in cyberspace (Domingo, 2016, pp. 157-158). China cannot compete with the US in conventional military force; the Lowy Institute Asia index 2018 shows the big difference in military capability among these great power; the United States score 94.6 out of 100, China 69.9, and in third place, Russia 61.4 (The Lowy Institute, 2018, pp. 5-11). China has a special interest in competing with the States in cyberspace because it takes advantage of the United States in this domain, dependence on the Internet to operate its critical national infrastructure, modest cyber defense, and weaknesses of US cyber-based systems. China is using the United States’ cyber-dependency to its advantage.

Cyber dependence is a notion employed by Valeriano and Maness (2015), which measures the dependence of a state on the Internet to carry out its daily activities and the functioning of its infrastructure. Among the most cyber-dependent states in the world is Estonia in the first place, the United States, Germany in the same degree, and a little less China (Valeriano & Maness, 2015, pp. 25-26). The more cyber dependent a state is more cyber threat faces. Furthermore, cyber dependence associated with the “network readiness” notion, disclose why it is more important to control what happens in cyberspace for some state than for others. In this case, the US and China’s network readiness are among the highest in the globe. This argument is well explained by Eriksson and Giacomello (2009, p. 209):

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After a century of humiliation, China is beginning to revise the US-led international system, so Western interpretations of cyberspace and internet governance are being put on trial (Bey, 2018, p. 32). China is negotiating with the West international cyber rules that benefit its domestic policies (Bey, 2018, pp. 34-35) to ensure its national security, which depends largely on controlling the flow of information in cyberspace and Internet filtering. Jiang (2010) notes that Washington underestimates Beijing’s capabilities to regulate the Internet. Consequently, there are an Internet Governance Wars (Franklin, 2009), between a single, connected internet promoted by the US. and a bordered internet endorsed by China, whose proposal is incompatible with the actual Internet governance regime; Internet Corporation for Assigned Names and Numbers (ICANN), the Working Group on Internet Governance (WGIG) and World Summits on the Information Society (WSIS) organizations dominated by public and private actors from the United States (Eriksson & Giacomello, 2009). American and Chinese ideas about the rules that should govern cyberspace are linked to the political positions they hold (Bey, 2018, p. 31). China is more emphatic in emphasizing the idea of cyberspace as a part of its territory over which it has sovereignty and does not allow it to function without its direct administration (NO, 2017, p. 4) and less allows the interference of external forces that impose rules on how the Internet should function within its border, cyberspace is inviolate and indivisible (Heinl, 2017, p. 136).

For the US, cyberspace represents a critical battleground because it allows competitors to operate continuously against them in search of strategic advantage and gain influence or control by breaking down networks and systems (Nakasone, 2019, pp. 13-14). The first initiative presented by the US government to counter the security challenges introduced by cyberspace is The Presidential Decision Directive 63 (PDD-63). It was developed in 1998 to protect the United States from the growing threats from cyberspace that can endanger national security. PDD-63 had a largely defensive emphasis, establishing the need to integrate computer network defense and computer network attack capabilities to maintain military dominance and address any threats from nations or non-state actors against American interests. More recently, in 2009, the United States Cyber Command was established. It is a joint command for offensive and defensive military operations in cyberspace (Sunday, 2016, p. 162).

Espionage in Cyberspace: An Old Conflict with a New Face

While state-sponsored cyber-attacks are accepted as a natural form of coexistence in cyberspace, industrial espionage and cyber-theft of intellectual property are being pointed out as the no-go line (Bey, 2018, p. 35) among great powers. China has been in an espionage dispute with the United States for over a decade (Akyesilmen, 2018, pp. 233-236). Valeriano and Maness (2015, p. 47) define cyberespionage as “the use of dangerous and offensive intelligence measures to steal, corrupt, or erase information in the Cyber-sphere of interactions”. China is expertise exploiting gaps in America’s cyberspace defenses; this tactic avoids direct confrontation in another realm of cyberspace. Espionage works as a low-level demonstration of a cyber capability. China has launched several cyber espionage campaigns against the US government and the private sector (Goodman, 2010). Unit 61398 and 61486 are two of the principal espionage groups which frequently targeting US political and military intelligence. Cyberespionage can be used long or short-term depending on the purpose. In the short-term, “consistent with covert actions, either gains access or merely sends an ambiguous signal of resolve altering short-term strategic calculus” (Valeriano et al., 2018). In the long-term, espionage seeks to manipulate the balance of information to accomplish a position of political, military, or economic advantage (Valeriano et al., 2018). China is most likely to engage in an espionage attack, both short and long-term. The US is most likely to engage in degradation operations. From 2000 to 2016, the US-Chinese dyad experience overall 48 Cyber conflicts, China 43 times initiated the incident and five by the US. The aim of China within these 48 interactions, 34, was short- and long-term espionage (Brandon & Maness, 2000-2016).

At present, for the US, the highest cost comes from intellectual property theft (IP theft) (Nye, 2017). According to Read (2014), the suitable concept for intellectual property theft performed online is economic cyberespionage, define as “the practice of infiltrating these networks to acquire a trade, technological or economic information to benefit a foreign country or foreign agent”. Because the benefits far exceed the costs, China has no incentive to restrict its behavior (Nye, 2011). For example, in 2013, Chinese hackers exfiltrate data related to the C-17, a military transport aircraft, the C-17 research, and development cost $3.4 billion. Unquestionably, economic cyberespionage is cost-effective (Segal, 2016).

Read (2014) notes that after the 2010 Google’s disclosure that China successfully infiltrated its network, the US government modified its position to the economic cyber-espionage threat. The attack on Google and at least 20 other companies is known as Operation Aurora and started in 2009. Until Operation Aurora, US politicians did not take proactive decisions to obstruct the economic cyber-espionage campaign. After Operation Aurora, the Obama administration showed significant attention to intellectual property management and economic cyberespionage. In the Sino-American relationship, these became dominant issues. In September 2015, President Obama threatened with economic sanctions against Chinese firms over state-sponsored cyber-attacks on American companies. The same year the two nations reached a bilateral agreement to halt cyberattacks used for economic espionage, which led to a decrease in this type of interaction. However, by 2018 China had started to enter the US networks again. In 2018, the United States launched The China Initiative to stop the theft of intellectual property by China and make it clear that these types of practices are not tolerated anymore (Healey, 2019). Nevertheless, to date, this remains an issue on which both nations have not reached a final agreement and remains a tense aspect of the bilateral relationship (Healey, 2019, pp. 143-144).

Intellectual Property (IP) theft can be of three types: patent theft, copyright theft, and trade secret theft. According to cyber studies literature, one of the main perpetrators of intellectual property theft is China. Trade secret theft, defense technologies, computer software, and source code are protected by US trade secret laws and are especially vulnerable to theft through hacking, international investment, or switching of companies from senior managers who take with them the knowledge to reproduce such technology (Healey, 2019, pp. 140-143). There are also American technology startups for which the Chinese market is too attractive, and the only way they are guaranteed market access is by offering to transfer technology to the Chinese government. Although American intellectual property laws protect the technology operated by these companies, American trade secrets are exposed through this legal mechanism imposed by the Chinese authorities on foreign companies. In this way, they manage to get hold of foreign technology (Healey, 2019, pp. 143-144). China’s interest in accessing and developing new technologies through cyber-espionage threatens US economic competitiveness and has long-term costs to US innovation capacity (McRaven, 2019, p. 5) and defense capability.

China’s use of cyber-attacks for industrial espionage is linked to its industrial policy. Together with several projects, cyberspace is aimed at making the country capable of producing high technology and designing its products and goods. AI technologies have received much attention from the Chinese government, and even though the United States leads this area, China is the fast-follower, allocating billions in investment and financing, since 2014 surpassed the United States in AI research and AI-related patent registration. Today is indisputable Chinese leadership in frontier technologies (McRaven, 2019, p. 40). Nevertheless, US national security points out that the illicit behavior of the Chinese government is the means by which the government has achieved some technological advance and if in the future they manage to innovate, it will be the result of IP cyber theft and illegal technology transfer (Deutch, 2018, pp. 44-45).

China has no valuable reason to stop stealing intellectual property; on the contrary, the economic, technological, and military benefits deriving from this practice are far greater. Neither economic sanctions nor bilateral treaties have been able to eliminate this type of attack. The US cyber command has stated that the constant attack to which they are subjected in cyberspace requires them to fight and defend forward because their adversaries are engaged in offensive, defensive, and espionage operations, and these threats must not go unpunished (Healey, 2019, pp. 1-5).

The US cyber forces operate with a joint cyber strategy that combines cyber deterrence and active defense strategies; which consists of a constant presence in the cyberspace of the US cyber forces to be able to analyze the behavior of the enemy and “warn targets of the details of coming (or ongoing) attacks, improving US defense” and in the use of “cyber capabilities for deterrence purposes” (Healey, 2019, pp. 5). It should also be mentioned that the US cyber mission force has the power to carry out offensive operations, in the first instance to support “operational plans and contingency operations”, and when the nation is the victim of a cyber-attack of significant proportions, it can carry out “action beyond blocking and after-action mitigation” (Kehler et al., 2017, p. 74). The 2015 White Paper on Military Strategy also made it clear that China’s actions in cyberspace also contemplate active defense understood as “strategic defense and operational and tactical offense” (Kania, 2015) cyber-attacks are a means of reaction against any action that poses a threat (NO, 2017, p. 6). The force deployed in cyberspace is a sign of the increasing militarization that is taking place in this domain (Deibert, 2011).

The Militarization of Cyber Domain: Who Leads It?

The narrative of IP theft as a national security issue allows the United States to make two strategic moves; first, it allows it to point to states directly as being responsible for the theft of IP, for example, on the occasions that the United States has pointed out this practice, it directly blames China, rather than a group of hackers like The Red Hackers. Second, the division between “domestic economic innovation and the production of classified information” (Halbert, 2016, p. 256) becomes ambiguous as a consequence, the narrative of IP theft as a threat to national security is being used to validate the dominant presence of the United States in cyberspace, enhanced surveillance and control over the Internet for national security reasons.

Halbert (2016) identifies that it was in the document issued in 2008 entitled Report to the 44th President of the United States on Cybersecurity where the relationship between intellectual property and national security began to be shaped, and subsequent to this document is that the narrative began to be repeated in the following official documents issued by US presidents about the cyberspace (Halbert, 2016). In the May 2011 report International Strategy for Cyberspace, it states that to protect economic and national interests from threats such as IP theft, diplomacy will be used first but will also seek to deter and stop potential actors from threatening US national and economic security in cyberspace (Halbert, 2016, pp. 257-258). Intellectual property as a national security issue has “achieved a level of political valence akin to the elusive threat posed by the war on terror” (Halbert, 2016, p. 261) and open the possibility of military escalation (Halbert, 2016, p. 264). The increasing militarization of cyberspace and defensive actions of the US and China raise doubts about whether cyberespionage will continue to be interpreted as an unfriendly act or will have the impact of being considered an act of war.

On the other hand, there is reason to be concerned about the “danger discourse” around intellectual property theft that is being used in the first place to mobilize the military budget towards a strong cyber strategy which requires an accumulation of cyber resources and personnel to address the growing threats from the cyber domain, including intellectual property theft from state and non-state actors. Second, it is being used to monitor internet traffic, including a more in-depth analysis of civilian data.

At the end of the Pax Britannica, the United States took the place of global leader, which it has maintained mainly because of its scientific development, which has guaranteed economic and military supremacy over the other powers around the globe (Paarlberg, 2004). However, its technological leadership seems to be under threat. In 2004, Adam Segal wrote the essay is America losing its edge? and stated, “it would be premature to declare a crisis in the United States’ scientific or technological competitiveness” (Segal, 2004). Sixteen years have passed since then, and the United States’ situation is not the same. With its economic power, China mobilizes large investments towards the technological sector and rivals the United States in scientific or technological competitiveness (McRaven, 2019). China’s intentions are not limited only to dominate labor-intensive manufacturing. The government is trying to develop China’s indigenous technological capabilities to achieve military superiority, while the United States uses the arms embargo and tightened transfers on high technology, trying to constrain China’s rise (Goldstein, 2015).

The technological development promoted by the Communist Party is recent compared to other industrialized countries. It started only 30 years ago. From 1950 to 1980, the government decided to open its market to foreign capital in exchange for technological transfer. In this period known as techno-nationalism, the manufacturing industry was primarily developed. In the 1990s, the government decided to make a strategic shift by emphasizing indigenous innovation because while neighboring countries like Korea and Japan produced high-end, high-tech products, China produced low-cost manufacturing products. By supporting enterprises through subsidies, free land, and low taxes, companies like Huawei could flourish. The government dramatically increased its participation in technological development and became the guide of a “national technological innovation” phase (Liu, 2016, pp. 4-5). It was also a strategy to counter the US embargo imposed in 1989. The embargo covers mainly US defense technology and military systems. Since 1990, the defense industry has been a priority for the Chinese Communist Party (Bräuner, 2013, pp. 557-558).

China has two purposes in enhancing its military power, in principle to weaken the US military advantages (Shifrinson, 2020, p. 197) in Asia-Pacific (Simón, 2020, pp. 5-6) following the philosophy of “win without fighting” and in the long run to catch up with the US and become a science and technology power (Kania, 2017, p. 5) to ensure military superiority in all domains. Friedberg (2018, p. 35) says that in Asia-Pacific, the US power projection system has been eroded by China’s anti-access/area denial (A2/AD). In addition, he states that China is developing a naval strategy to project power beyond its shores, reaching out to “the Indian Ocean, the Persian Gulf and off the coast of Africa” (Friedberg, 2018, p. 38). As far as China is concerned, complemented and supported by other political instruments, the military instruments of the United States have two purposes: first, to enable the integration of Beijing into the processes of cooperative security and actions compatible with American interests in general. Second, to provide security to Asian allies by demonstrating that the United States has the military capability to provide security in the area and to discourage China from using military force as a means of conflict resolution in disputed areas, whether islands or states such as Taiwan (Swaine, 2011, pp. 147-148).

The ongoing military competition between the US and China is driven by two critical characteristics of the world technological scene. First, the commercial use and development of technologies such as artificial intelligence and quantum computing have increased. These technologies are both for military and civilian use making their proliferation and reflects greater diffusion than technologies exclusively for military use, resulting in state competitors and non-state actors being able to acquire them. Second, the first line of military competition is innovation because the development of high technology requires closing the gap between development and military implementation.

Washington and Beijing have responded to the changing innovation landscape. For its part, the United States has established Defense Innovation Unit Experimental (DIU) to get involved in the ecosystem of commercial, technological innovation. Chinese leaders have consolidated a civil-military fusion strategy that removes barriers between the private sector and the military-industrial base (Laskai, 2018a). China intends to transfer the success of the technology sector into military power. The civil-military fusion strategy allows it to involve the country’s high-tech civilian companies in defense projects.

In May 2016, the Innovation-Driven Development Strategy (IDDS) was officially declared by Beijing. The focus of this strategy is China as a champion of innovation. It provides an insightful and forward-looking projection of China over the next three decades.

1. Becoming an “innovative country” by 2020

2. Joining the leading edge of advanced innovation countries by 2030

3. Becoming a strong global innovation power by 2050

In this regard, Xi Jinping has declared: “To carry out the innovation-driven strategy, the basic thing for us is to enhance our independent innovation ability…” (Xi, 2014, p. 134) because “Under a situation of increasingly fierce international military competition, only the innovators win” (Zhong, 2017). China has developed three projects in which it has set the course for the next decades to increase its technological capabilities. Integrated Circuit (IC) 2014 Guidelines aim to reduce the dependence on US integrated circuit manufacturing by developing a local industry that produces chips and meets the consumer needs of Chinese industries. Perhaps one of the most well-known projects is Made in China 2025, an ambitious project that aims to transform the manufacturing industry through three transitions “From China’s speed to China’s quality; from China’s products to China’s brands; and from ‘made in China ‘created by China” (Liu, 2016, p. 2). Implementing this strategy requires industries to modernize their factories to apply smart technologies and solve the challenges they face, such as labor costs, pollution, and delays in production and export. Next-Generation Artificial Intelligence (AI) Development Plan aims to make China a world leader in AI by 2030.

In addition to the civil-fusion strategy, in the behavior of the Chinese government, one can identify the development of the “Going Out” strategy that encourages technology transfer from overseas (Mori, 2019, p. 82). China is investing billions in new American companies with cutting-edge products that could have military applications. China’s interest in US startups is focused on artificial intelligence and robotics. In this sense, the Trump Administration has made two important and necessary moves to define the future of the United States: reviewing carefully the process that allows Chinese investment in critical technologies and better controls on exports of sensitive technologies (Segal, 2019).

Artificial Intelligence Competition: A New Arms Race?

During the last decades, a technology that has burst onto the political scene is artificial intelligence (AI). Artificial intelligence can disrupt the international system (Demchak, 2019) and affecting the balance of power (Horowitz et al., 2018; Kania, 2017). Artificial intelligence can add sophistication, speed, precision, and lethality to military and strategic affairs (Payne, 2018). AI is a set of various computational techniques which operate in different dimensions, physically on objects: tanks, airplanes, robots can function without human intervention. In a non-tangible way, it operates in the processing and interpretation of information through image-recognition algorithms (Horowitz, 2018, p. 48). Also, AI is developed due to four analogous inputs “abundant data, hungry entrepreneurs, AI scientists, and AI-friendly policy environment” (Lee, 2018). These four inputs are found in large numbers in China.

We are entering into a phase where two great powers have an equal goal: to be the leader in all aspects of AI. Authors like Barnes and Chin (2018) estimate that this situation is triggering an escalating AI arms race because both nations want to be the first to find military applications of AI. Horowitz (2018) supports their point of view. He adds that there is a strong possibility that the use and development of autonomous lethal weapon systems will lead to an arms race. After all, military technology determines how wars will be fought and won (Sechser et al., 2019, p. 732).

The Pentagon has been closely following China’s movements, especially those involving military investment. Since 2014, the United States has initiated efforts to become a leader in AI to increase and maintain its economic and military power. Barnes and Chin note that William Roper, then the head of the Pentagon’s Strategic Capabilities, played a key role in getting the US government to take that direction and gain an advantage over China in the field of AI. However, in May 2017, a game between Ke Jie -the best player on earth of Go- against AlphaGo -one of the most advanced AIs in the world- triggered China to have its “Sputnik Moment”. AlphaGo’s victory from the Western viewpoint represented the victory of the machine over man. According to Lee for China, that game visualized in real-time by millions of Chinese affected the Chinese psyche and government policymakers, the West overwhelmingly showing its technological superiority and dominance in an era of artificial intelligence (Lee, 2018, pp. 11-29) which led the Chinese authorities to react.

Two months later of the Go game, China revealed to the world the New Generation AI Development Plan 2017, in it establishes its firm intentions to lead the world in AI by 2030, also sets out a three-dimensional agenda, namely “tackling key problems in research and development, pursuing a range of products and applications, and cultivating and expanding AI industry to 1 trillion RMB ($150 billion) by 2030” (Kania, 2017, p. 9). Since its release, China’s national AI Plan has promoted AI as a high-level priority for Beijing. Military-Civil Fusion AI has made China emerge as an AI powerhouse by working as one team with companies such as Baidu, Alibaba, Tencent, and iFlytec (Horowitz et al., 2018, pp. 12-14).

Harnessing AI Technology, the Chinese Communist Party (CCP) intends to strengthen its national and military power (Ahmed et al., 2018). According to Barnes and Chin (2018), to overtake the United States in the field of AI, China has adopted the American strategy to use it against them, firstly the creation of a Chinese version of the Defense Advanced Research Projects Agency (DARPA) called The Scientific Research Steering Committee, which will report directly to President Xi Jinping and secondly investing heavily in Zhongguancun where China’s Silicon Valley is located.

The first White House initiative in artificial intelligence was carried out in 2016 during the Obama administration’s National Artificial Intelligence Research and Development Strategic Plan. However, it was not until February 11, 2019, that the United States presented a whole-of-government strategy called AI Initiative. The fact that it took three years to present an AI strategy has been criticized, pointing to the slowness with which the White House has pushed cutting-edge technologies (McRaven, 2019, pp. 47-48). Key principles stated in Obama’s report were adopted more quickly in China than in the United States (Horowitz et al., 2018, p. 10). Dascalu (2018) compares the policies in AI presented by Obama and Trump concludes that: “the development of foreign AI policy will benefit the US as it will be a way to gain power through AI technologies and pursuing hegemony, as power will assure the survival of the US” (Dascalu, 2018, p. 35). In the last two years, the present administration has put considerable effort into prioritizing the development of artificial intelligence, a joint effort of both the White House and federal agencies to ensure that the US remains the world leader in AI. The most recent action by the White House was announced in February 2020. President’s FY21 budget commits to double AI R&D over two years and the recent adoption of AI ethics principles by the Department of Defense.

In general, both countries have prioritized AI because of the economic advantages that can be obtained from creating AI for specific uses by having the advantage of being the first IP registrars to ensure economic leadership. And secondly, the military advantage over the opponents by applying AI capabilities to their military (Horowitz et al., 2018, pp. 11-12), such as automation of decision making, command and control, and autonomous systems. For China, artificial intelligence matters because it is crucial to the future global military and economic power competition, and also, achieving leadership in AI technology is a step towards reducing dependence on international technology imports (Allen, 2019, pp. 3-4). It is crucial for the US to achieve an offset strategy -first nuclear weapons, second stealth, and precision strike- and AI is announced in the US as the third offset strategy (Payne, 2018, p. 7).

Halbert (2016, p. 262) suggests that “the data theft undertaken by the Chinese is specifically designed to improve their military and technological capacities”. However, having access to AI technology through cyber espionage or mimicry is not easy. Firstly, mimicking AI applications is expensive and complex. Governments that have developed this type of technology are forced to deal with the components in secrecy, which means that they are not found on the market mainly because they are classified. Also, the technical knowledge needed to develop, adapt, or modify algorithms and develop AI-based military capabilities requires advanced knowledge. Getting an AI application to work properly can take a long time. Secondly, the cybersecurity used by military technology to prevent hacking and spoofing is very high compared to the technology intended for civilian use, which adds an extra layer of security against copying attempts.

Is America Prepared for Winning the Competition Against China?

During the Cold War, the United States increased its power by engaging in internal and external balancing and overcoming the USSR. Since the end of the Cold War, the US has followed a strategy of primacy in different areas, domestic economic growth, technological innovation, and military might. However, nowadays, the US primacy seems to have ahead of the challenges that can take it to a level of competition similar to that of the Cold War. Blankenship and Denison (2019) question the capacity of the United States to successfully face this stage of the great-power competition against China because they perceive that the United States lacks internal and external balancing. Internal balancing is based on developing military and economic capabilities “and investing in technologies and other domestic areas that help convert the latent capabilities of the state into material strength” (Blankenship & Denison, 2019, p. 45). In contrast, external balancing represents the creation and strengthening of strategic alliances to face a common threat. As long as the United States does not change its strategy in critical areas such as human capital, a better relationship with the private sector, and R&D expenditures, the risk of losing the present competition to China is real.

#### Technological parity encourages Chinese aggression---that goes nuclear.

Gerald C. Brown 21, Defense Analyst, Valiant Integrated Services, "Understanding the Risks and Realities of China’s Nuclear Forces," Arms Control Association, 06/01/2021, https://www.armscontrol.org/act/2021-06/features/understanding-risks-realities-chinas-nuclear-forces.

Nevertheless, China’s capabilities represent a substantial threat that must not be ignored. Quantitative comparisons of nuclear arsenals are a relatively crude manner of understanding nuclear risks and, in the case of the U.S.-Chinese relationship, wholly insufficient. More than ever, U.S. policymakers need to understand Chinese nuclear strategy. In the U.S.-Chinese context, policymakers should be more focused on how conventional weapons and related strategies could impact the nuclear calculus between the two countries.

Chinese Nuclear Strategy

Unlike Russia and the United States, China has found nuclear weapons to be of rather limited utility in war-fighting. It built what it describes as a “lean and effective” nuclear deterrent, with the intentions of deterring a nuclear attack and preventing nuclear coercion.1 Strategists in Beijing have long thought that the destructive force of nuclear weapons limits their utility, while conventional forces are more flexible and usable in conflict. Conventional forces are thought to be where wars are won or lost.2 In that sense, China’s nuclear forces are intended to check U.S. nuclear dominance while winning conventional conflicts at lower levels of escalation. To make that happen, China is seeking to build a nuclear force capable of surviving a nuclear first strike and retaliating with an unacceptable level of damage. Experts have perhaps best described China’s nuclear strategy as one of “assured retaliation.”3 Instead of seeking parity with other nuclear states and being able to engage in counterforce campaigns, China finds it sufficient to maintain a more modest, secure, and survivable force. If China can sufficiently absorb a first strike and retaliate, even with only a few warheads, Beijing believes an adversary is unlikely to decide that the risk of attacking China is worth the benefit.

Since China’s first nuclear test in 1964, it has consistently maintained a public, declaratory no-first-use policy, adhering to what it describes as a “self-defensive nuclear strategy” that would anticipate using nuclear weapons only as a “counterattack in self-defense.”4 Western analysts have rightfully pointed out that a no-first-use pledge may not be entirely credible on its own. Although the pledge may be sincerely held, during a crisis, escalation could be unpredictable. Additionally, a small number of Chinese analysts have suggested that what China defines as a counterattack may be ambiguous under certain, limited conditions, such as conventional attacks seeking to neutralize China’s nuclear forces.5

Despite Western doubts, the fact remains that Chinese strategists believe that the pledge holds true. An unambiguous no-first-use stance remains the official stance of the Chinese government, and China’s nuclear strategy is built around this concept. Authoritative texts on Chinese military thinking have described three major missions for Chinese nuclear forces. In peacetime, they seek to deter enemies from launching a nuclear war with China. In wartime, they constrain the scope of war, preventing a conventional conflict from escalating to a nuclear exchange. If war does escalate to nuclear conflict, they serve to conduct nuclear counterattacks.6 The texts consistently describe only one envisioned use of nuclear weapons, the nuclear counterattack operation, in response to a nuclear strike.7

Operational practices have reinforced this. Beijing maintains a highly centralized nuclear warhead storage and handling system, with warheads typically thought to be stored unmated from their delivery vehicles rather than loaded and ready for launch.8 Further, training for nuclear brigades reflects the practice of counterattacking under nuclear conditions. Yet, there are indications of evolution. Recent U.S. government reports have suggested that some People’s Liberation Army Rocket Force (PLARF) brigades may spend time on higher alert and may seek to shift to a launch-on-warning posture in the future in order to increase survivability under nuclear attack. China has been developing a space-based early-warning system with assistance from Russia that could support this.9

Nuclear Force Projections

As the U.S. annual threat assessment noted, there are signs of recent substantial changes in Chinese nuclear forces. The most important changes have been primarily qualitative, but notable quantitative changes are also occurring. These are understandably alarming to U.S. policymakers. Although the size of Chinese nuclear forces may still be dwarfed by the U.S. arsenal, its growth represents a substantial complication for the United States. Further, although the United States and Russia are modernizing their arsenals, they have been reducing their stockpiles over the past few decades slowly but significantly. China’s nuclear expansion represents a concerning shift away from its obligations under the nuclear Nonproliferation Treaty to reduce its arsenal, and that is likely to impact U.S. and Russian decision-making.

Yet, understanding these changes in the context of China’s nuclear strategy is important. Instead of trying to reach parity with or exceed the U.S. nuclear arsenal, China seems intent on ensuring that it has an assured retaliatory capability following U.S. strikes. Given U.S. nuclear and technological superiority, China likely has never had a sufficiently survivable nuclear deterrent against the United States, a goal that was more aspirational than anything else. Revolutions in intelligence, surveillance, and reconnaissance technologies, coupled with advances in conventional precision weapons, have long rendered China’s nuclear forces vulnerable. The U.S. ballistic missile defense program threatens to intercept any surviving retaliatory force, further jeopardizing China’s retaliatory capability.

For the first time in history, the People’s Liberation Army (PLA) seems to be moving toward a survivable nuclear force capable of executing a second strike. Research suggests that Chinese nuclear expansions and modernization are oriented toward creation of a more mobile and redundant force that can survive U.S. counterforce capabilities, including conventional systems such as the Conventional Prompt Global Strike system, and its missiles being able to penetrate U.S. missile defense systems.10 Consequently, although China’s nuclear force size will expand, it does not appear likely to expand to the size of the U.S. nuclear arsenal in the near future.

There is understandable doubt about the claim of China doubling its nuclear arsenal, but it does not appear to be out of the question. China is fielding an increasing number of multiple independently targetable reentry vehicle weapons, such as the DF-5B deployed in 2015 and the recently deployed DF-5C and DF-41, that improve the ability of China’s intercontinental ballistic missile (ICBM) arsenal to penetrate the U.S. missile defense system.11 Defense Department estimates do not appear to include the DF-41, which is just starting to be deployed. Installing multiple warheads on these weapons will quickly expand the number of nuclear weapons in China’s arsenal. Further, PLARF brigades have been increasing at an unprecedented rate. The number of PLARF brigades reportedly increased from 29 to 40 between 2017 and 2020, and brigades continue to be added as new missile types are fielded.12

China’s shift to a nuclear triad will further increase the number of its nuclear warheads as these new systems are equipped. China is creating a more survivable nuclear submarine force, expanding the number of Type 094 ballistic missile submarines and developing the quieter Type 096 submarine with the JL-3 sea-launched ballistic missile as a complement. The PLA Air Force is also adopting a nuclear mission by developing a new air-launched ballistic missile that may be nuclear capable, as well as the nuclear-capable H-20 strategic bomber.13

[Chart omitted]

Significantly, not all of China’s nuclear weapons are intercontinental forces capable of striking targets located in the continental United States. China has invested in nuclear weapons that specifically threaten the immediate region. Its new air capabilities, along with recently deployed midrange and intermediate-range ballistic missiles such as the DF-21E and the DF-26, hold regional adversaries and U.S. overseas bases at risk. China also recently deployed a new hypersonic glide vehicle, the DF-17, that may be nuclear capable. Importantly, although China’s nuclear expansion may be oriented toward a strategy of assured retaliation, that does not prevent Beijing from orienting its expanding nuclear capabilities toward a more threatening posture in the future. As China’s capabilities expand, its operational doctrine may well follow suit.

Emboldened Conventional Operations

China’s nuclear forces can be considerably more concerning when not considered in isolation from other tools of war. Analysts and policymakers need to look at how nuclear weapons can affect the broader picture of warfare, including how they impact PLA conventional operations and the type of wars China envisions fighting.

China’s military strategy is focused on “winning informationized local wars,” effectively local, high tech wars in which the information domain will play a dominant role. Although the PLA’s reach is increasingly global, it has oriented itself toward local conflicts, with a particular emphasis on maritime conflicts, as the main war-fighting domain. This primarily concerns Taiwan but also the East and South China seas among others.14 In 2015, the PLA made a drastic change to its command structure, orienting itself into joint war-fighting theater commands, directly geared to fighting in these regions. The PLA seeks to deter the United States from intervening in these local wars or to defeat the United States locally if it does.

In these local wars, nuclear overmatch against the United States is hardly necessary. Instead, China is more concerned with preventing U.S. nuclear coercion and intervention and constraining the scope of any war that may erupt. PLA strategists appear to believe that the United States would not intervene in a conflict that did not directly threaten the United States if there was a risk that the conflict could escalate to the nuclear level.15 As Zhao Xijun, former deputy commander of the Second Artillery Force, has said, states “become very cautious” when contemplating military intervention against other nuclear-armed states.16

Evidence suggests that a secure second-strike force may even embolden the PLA in local conventional conflicts, allowing them to accept greater risks at lower levels of escalation. That especially holds true when considering that all sides in China’s multiple territorial claims perceive themselves as defending the status quo.17 Research has revealed the PLA’s overconfidence in its ability to control conventional escalation. Unlike in the case of nuclear weapons, Chinese documents emphasize “seizing the initiative” early in conventional conflicts. They envision using tools such as cyberwarfare and conventional missiles early, hard, and fast, even preemptively.18 Although the focus of these writings is not nuclear weapons use, conventional operations could be emboldened by perceptions of nuclear stability.

Entanglement Risks

Another complication is that firebreaks between conventional and nuclear forces are increasingly blurred in modern warfare, and substantial risks exist when conventional strategies affect nuclear forces. One notable example involves discussions on space weapons. PLA assessments have highlighted the increasing importance of this domain, and the asymmetric weakness represented by U.S. overreliance on space in conflict. Critiques of Chinese military writings point toward the offense-dominant nature of such operations and the need to control the space domain early in conflict. They further assert that attacks against U.S. satellites would carry relatively low escalation risks and could even deescalate a conflict.19

U.S. satellite systems, however, are dual use, enabling a wide range of conventional and nuclear operations. Attacks against U.S. satellites would not only affect the country’s conventional capabilities, they would jeopardize the heart of the U.S. nuclear command, control, and communications and early-warning capabilities.20 Further, although Chinese military analysts highlight the advantages of engaging in satellite attacks during conventional conflicts, the same actions would likely be taken prior to a nuclear conflict in order to degrade the effectiveness of U.S. missile defenses and ensure the effectiveness of a nuclear strike. As a result, Washington would view any Chinese attack on its satellites as profoundly destabilizing, potentially inciting a U.S. nuclear response.

Similar entanglement risks exist with Chinese forces. PLARF bases all appear to host conventional and nuclear missile brigades. These are geographically separated from each other, but most of the weapons are on mobile platforms, creating overlapping risks when deployed. Conventional and nuclear forces seem to rely on the same supply and logistics infrastructure. Although command and control infrastructure are ostensibly separate, the extent of this separation is not fully understood, and overlap seems likely to exist.21 Additionally, China’s nuclear submarine force appears to share the same onshore communications systems with Chinese conventional submarines.22

Furthermore, an increasing number of mid-range to intermediate-range weapons systems are dual use. Although the DF-21 maintains distinct conventional and nuclear variants that are typically not co-located, they are likely indistinguishable when deployed. In the case of the DF-26, conventional and nuclear warheads are likely co-located. Reports have highlighted DF-26 brigades, equipped with conventional and nuclear weapons, that hold drills in which units launch a conventional attack and then reload with a nuclear warhead to prepare for nuclear counterattacks.23

In conflict, attacks against China’s shore-based communications systems that are directed at China’s conventional submarine force would cut off its nuclear-armed submarine force as well. Campaigns against China’s vast conventional missile force would almost certainly degrade China’s nuclear force too. The fixed bases supporting PLARF brigades would be likely targets as the dual nature of these bases means conventional and nuclear forces share the same base headquarters, resulting in severed communications and logistics networks for PLA nuclear forces. Even if China’s nuclear and conventional command and control networks were sufficiently separate, it would be challenging to distinguish between them. Conventional and nuclear midrange to intermediate-range weapons would likely be indistinguishable in conflict.

How would China respond to attacks against these dual-use systems and the degradation of its nuclear force? It is somewhat comforting that China’s ICBM force is relatively distinguishable from its dual-use weapons, and the majority of the force is located deeper within the Chinese mainland. What is not obvious is how strikes against regional-range nuclear forces would be perceived by Beijing in the middle of armed conflict. If China’s nuclear forces were degraded in any way, authorities could conclude that they no longer have a survivable deterrent. In the heat of a conflict, it is difficult to assess how Chinese decision-makers would react to this.

Further, a degraded Chinese nuclear force, in the middle of a crisis, could provide a tempting counterforce target for the United States. In such a case, there would be a challenge of perceptions, with neither the United States nor China truly knowing the other’s intentions. In conflict, with the ability to destroy China’s nuclear force or at least limit damage to itself should China opt for nuclear use, would the United States decide that a counterforce strike is worth the risk? The United States would understand that if it failed to strike, China could opt to use its remaining nuclear forces and inflict substantial damage. Similarly, knowing the United States faced such a dilemma and that it could face a disabling counterforce strike, China would be faced with strong use-it-or-lose-it pressures. All of these circumstances would be exacerbated by the fog of war, a degraded information environment, and the speed required to make decisions.

Some Western analysts have speculated that China’s conventional and nuclear weapons capabilities have been intentionally entangled to heighten the risks facing adversaries and to deter conflict. There is little evidence that this was a motivator. Instead, the PLA likely sought to take advantage of economies of scale. It is far cheaper and more logical for China to use the same designs for conventional and nuclear variants to its weapons, allowing for savings on manpower, production, maintenance, and research costs. Even so, this is hardly comforting and may leave the PLA less aware of risks resulting from a comingled system. States that entangle forces intentionally are likely better prepared for the risks involved. When such entanglement arises from nonstrategic reasons, as seems likely in China’s case, states are less aware of the escalatory risks, which may exacerbate escalatory pressures in a conflict.24

War Control and Inadvertent Escalation

There is little evidence that technological entanglement is a direct, strategic choice, but there are some limited indications that China could use nuclear signaling to constrain the extent of conventional conflicts and contribute to escalation control.25 Nuclear signaling includes such actions as test launches, release of the locations of targets, an increase in readiness levels, missile deployments, or other actions to demonstrate resolve. The goal would not be necessarily to use nuclear weapons. Instead, the signaling would aim to raise fears that a conflict could credibly escalate to the nuclear level, thus “causing the enemy to dread that the possible consequences of its actions will be that its losses will exceed its gains, thereby causing the enemy to change its plans for risky activities and achieving the goal of restricting the war to a certain scope.”26 In this way, China could capitalize on the uncertainty of a potential nuclear conflict to deter intervention and constrain escalation in conventional conflicts in the Pacific region. Such risks are compounded by China’s use of purposeful ambiguity as an integral component of its approach to nuclear deterrence.27

One major problem is that such signaling by the Chinese may be indistinguishable from preparations for a nuclear attack. Yet, writings by experts on deterrence and signaling operations fail to acknowledge that these provocative actions could be misinterpreted by an adversary. In general, Chinese experts seem to believe that nuclear escalation is unlikely to be effectively controlled, but are overconfident that conventional conflict can be controlled without escalating to the nuclear level.28 Lack of awareness about escalation risks could very well make the PLA more aggressive in local conflicts.

Finally, the concept of an “existential threat” may be different in China than many perceive it to be. The PLA is not China’s professional military so much as it is the armed wing of the Chinese Communist Party, a point drilled into PLA members and emphasized in the era of Chinese President Xi Jinping, who is also general secretary of the party.29 In that sense, destruction of the party may be synonymous with destruction of the state. Such conflation of ideas could come into play in the face of a humiliating conventional defeat by China over Taiwan or another dispute that China considers central to its sovereignty. If there were a perceived risk, irrational or not, that such losses could fracture the legitimacy of the Communist Party, drastic actions could become more likely. If Beijing perceived that nuclear weapons use would ensure victory in a conflict, it might escalate to using nuclear weapons in a last-ditch effort.

Conclusion

For all the concern from U.S. policymakers about China’s nuclear expansion, relatively little attention has gone into adequately examining the country’s military and nuclear strategies. There is a tendency among many U.S. policymakers to blindly equate the challenge of China with the strategies faced by the United States and the Soviet Union during the Cold War or to mirror image their own strategic thinking onto Chinese strategists. That is insufficient and dangerous.

China’s thinking on escalation and war-fighting often differs substantially from that of the Americans and Soviets. The authoritative literature on these subjects within the Chinese system does not represent errant thoughts of lone strategists. It represents doctrinally informed guidance that culminates the work of dozens of China’s top strategists, originating from China’s most authoritative institutions with ties directly to China’s decision-making bodies, and is used to educate and inform PLA officers. Although written for an internal audience, several of the most important of these texts, such as “Science of Military Strategy” and “Science of Campaigns,” have been translated into English by U.S. scholars and need to be mined thoroughly by U.S. planners for insights.30

There is also a need for greater engagement and crisis management measures between U.S. and Chinese officials. Varying levels of formal and informal dialogues between Chinese and U.S. officials directly or between delegations of recently retired officials help alleviate misperceptions and enhance understanding of escalation triggers and redlines. Although there have been some talks at the unofficial level in recent years, Beijing remains reluctant to pursue official talks on nuclear weapons. Given the substantial misperceptions in the relationship, regular engagements are critical. Similarly, crisis management mechanisms would be to the advantage of both sides in communicating intentions and alleviating misperceptions during a crisis. Thus far, the pursuit of new initiatives has met limited success, and Beijing tends to eschew the methods that are in place. Although arms control agreements appear to be unfeasible between the United States and China for the time being, official talks and better crisis management measures would be a strong first step.

Finally, the United States needs to look at deterrence and escalation more holistically. The primary risks of nuclear escalation stemming from the U.S.-Chinese relationship do not come from nuclear weapons alone. Warfare is increasingly complicated; a greater appreciation of how conventional and nuclear strategies intersect is needed. In the Indo-Pacific theater, conventional forces may play a greater role in deterrence than many in the nuclear community acknowledge. U.S. Admiral Phil Davison, commander of the U.S. Indo-Pacific Command, recently observed that “the greatest danger the United States and our allies face in the region is the erosion of conventional deterrence vis-à-vis the People’s Republic of China.” Increasingly, this erosion affects conventional and nuclear strategies. Organizational separation within the U.S. military establishment may leave conventional and nuclear planners ill-informed of escalation risks stemming from areas outside their purview. Better integration of conventional and nuclear communities, a more holistic understanding of the risks and challenges, and a bolstering of regional conventional forces could play a significant role in managing and deterring conflict that could otherwise escalate to the nuclear level.

#### BUT, only by enabling neo-Schumpeterian competition can the US maintain dominance:

#### 1. Competition---it prevents the blocking of deployment, the collapse of defense innovation, AND circumvents Chinese theft and coercion.

Ganesh Sitaraman 20, Professor of Law at Vanderbilt Law School, "Too Big to Prevail," Foreign Affairs, March/April 2020, https://www.foreignaffairs.com/articles/2020-02-10/too-big-prevail.

When executives at the biggest U.S. technology companies are confronted with the argument that they have grown too powerful and should be broken up, they have a ready response: breaking up Big Tech would open the way for Chinese dominance and thereby undermine U.S. national security. In a new era of great-power competition, the argument goes, the United States cannot afford to undercut superstar companies such as Amazon, Facebook, and Alphabet (the parent company of Google). Big as these companies are, constraints on them would simply allow Chinese behemoths to gain an edge, and the United States would stand no chance of winning the global artificial intelligence (AI) arms race. That technology executives would proffer these arguments is not surprising, but the position is gaining traction outside Silicon Valley; even Democratic politicians who have been critical of Big Tech, such as Representative Ro Khanna of California and Senator Mark Warner of Virginia, have expressed concerns along these lines.

But the national security case against breaking up Big Tech is not just weak; it is backward. Far from competing with China, many big technology companies are operating in the country, and their growing entanglements there create vulnerabilities for the United States by exposing its firms to espionage and economic coercion. At home, market concentration in the technology sector also means less competition and therefore less innovation, which threatens to leave the United States in a worse position to compete with foreign rivals. Rather than threatening to undermine national security, breaking up and regulating Big Tech is necessary to protect the United States’ democratic freedoms and preserve its ability to compete with and defend against new great-power rivals.

DESTINATION: CHINA

Competition with China will define U.S. national security conversations for decades to come, and Americans need to think carefully about the role technology will play in this increasingly competitive environment. But to claim that the likes of Amazon and Google are helping counter China’s technological and geopolitical rise simply because they are American companies makes little sense.

Almost all big U.S. technology companies have extensive operations in China today. Google announced plans for an AI research center in Beijing in 2017 and is exploring a partnership with the Chinese Internet behemoth Tencent. Microsoft is expanding its data centers in China and has recently built an entire operating system, Windows 10 China Government Edition, for the Chinese government. Amazon’s cloud service in China is second in popularity only to that of its Chinese counterpart, Alibaba. Apple famously designs its phones in California but manufactures them in China. Facebook, notably, does not operate in China—but not for lack of trying. The company repeatedly attempted to gain access to the Chinese market only to be blocked by Chinese government officials.

Merely operating in China may seem harmless. Yet according to scholars, U.S. government officials, and even American business associations, any U.S. technology company working in China could very well be supporting the Chinese state and the expansion of digital authoritarianism. In the course of their operations in the country, U.S. companies routinely interact with Chinese companies, some of which are run or partly owned by the state. Those that are not still have informal ties to state and Communist Party officials and face strong incentives to behave as the state wishes even without direct pressure from the government. Because the Chinese market and the state are intertwined in this way, Chinese companies that partner with foreign ones are highly likely to pass along operational and technological developments to the Chinese government and military, including in ways that could advance Beijing’s emerging surveillance state and accelerate its ability to spread its model of digital authoritarianism around the world.

These challenges are particularly clear in the case of AI, as commercial innovations in that field can also have military implications. Under Beijing’s doctrine of “civil-military fusion,” Chinese researchers and private companies are working ever more closely with the government and the military, which means that technological innovations that may have originated with a foreign company active in China can find their way to supporting the People’s Liberation Army. “If you’re working in China,” Ashton Carter, a former U.S. defense secretary, has said, “you don’t know whether you’re working on a project for the military or not.”

In addition to widely known concerns about Chinese espionage and surveillance, integration with the Chinese market also opens Big Tech—and the United States—to pressure from China, which can use that influence to hurt U.S. interests. Scholars refer to this tactic—turning economic interdependence into political leverage—by a variety of terms, including “geoeconomics,” “reverse entanglement,” and “weaponized interdependence.” Whatever it’s called, China has a long track record of doing it, across countries and industries. To retaliate against South Korea’s adoption of a U.S. missile defense system in 2017, China blocked Chinese travel agencies from offering trips to the country. And after the dissident Liu Xiaobo was awarded the Nobel Peace Prize in 2010, China temporarily blocked imports from Norway.

To avoid offending Chinese officials and potentially losing access to the country’s large market, companies are adapting their behavior even outside China’s borders. Hollywood studios have been accused of rewriting scripts and editing scenes for that purpose: choosing to blow up the Taj Mahal instead of the Great Wall of China in the movie Pixels, according to Reuters, and replacing China with North Korea as the main adversary in the 2012 remake of Red Dawn, according to the Los Angeles Times. In 2019, Daryl Morey, the general manager of the NBA basketball team the Houston Rockets, tweeted in support of pro-democracy protesters in Hong Kong; soon thereafter, he deleted the post. In the days that followed, the owner of the Rockets wrote that Morey did “NOT speak” for the team, and the NBA said it was “regrettable” that Morey’s views had “deeply offended many of our friends in China.” (After a public outcry, the NBA clarified that it would not censor or fire Morey.) A year earlier, Mercedes-Benz had posted a quote from the Dalai Lama on Instagram. After an online backlash in China, the automaker quickly erased the quote, and its parent company, Daimler, said that the post had contained an “erroneous message” and had “hurt the feelings of people” in China. The People’s Daily, China’s largest newspaper, later branded Mercedes-Benz as an “enemy of the people.”

Such conduct by Western companies illustrates a broader point: they act based on their commercial interests, not in the name of abstract democratic principles or for the cause of U.S. national security. The same is true when these companies try to influence government policy. The potential stakes are high. The U.S. Department of Commerce, for instance, has the power to set export restrictions on some sensitive technologies, including AI; those restrictions may be important from a national security standpoint, even if they negatively affect some companies’ bottom lines. Yet the dominant ideology among corporate lawyers today holds that the sole aim of managers is to maximize shareholder profits, and corporate lobbyists are thus likely to advocate public policies that support those profits even if they run counter to U.S. national interests.

Practically all U.S. companies active in China are subject to such pressures to one degree or another, and how to address that predicament is another question altogether. But the size and dominance of American technology companies are part of the problem. As the U.S. technology sector becomes more concentrated and the few players in it become more dependent on the Chinese market for consumers and profits, these firms—and, by extension, the United States—become more vulnerable to pressure from Beijing. Antimonopoly policies could help remedy this problem: in a fractured market with many players, the sheer number of firms would all but guarantee that some would build supply chains that circumvented China, or build their products wholly in the United States, or simply choose not to engage in the Chinese market—whether because of idiosyncratic preferences, competitive dynamics, product differentiation, higher costs, or other factors.

Consider another industry whose structure resembles that of Big Tech: Hollywood. Like the technology industry, today’s entertainment sector consists of a handful of studios that are increasingly dominant at the box office and able to pressure theaters to give their content preferential treatment. If these big, integrated companies comply with Chinese censors out of a concern for market access, then U.S. consumers will not see content that offends the Chinese government. By contrast, in a system with a large number of small studios and competitive distribution channels, many companies would lack the size, scope, or desire to cater to the Chinese market, let alone be dependent on it. Nor would they have the power or scale to lock out new competitors through vertical integration. The result would be a market in which Americans had a range of content choices, including entertainment that might not accord with the views of foreign censors.

Of course, in theory, it is possible that a small number of big U.S. technology firms, each with monopoly-like power, might be so profitable as to have no need for the Chinese market, whereas small companies with razor-thin profit margins might depend more on that market for consumers and profits. But this hypothesis has not been borne out. The current technology sector is already highly concentrated, and yet today’s technology companies are not forsaking the Chinese market; instead, they are desperate to expand their business there.

As they do so, they will likely be subject to the same pressures bearing down on Hollywood, the NBA, Mercedes, and other entities that want to operate in China. Companies such as Amazon and Google, which both produce their own content and distribute it through their platforms, may over time be tempted to make that content palatable to Chinese censors. And because those firms have immense market power within the United States, American consumers will be left with no serious, scalable alternatives.

A more competitive technology sector, with many smaller players, would also mitigate the ill effects of lobbying, for much the same reasons. Fewer companies would be dependent on the Chinese market, and those that were would be differentiated enough to often end up on different sides of policy debates. Their lobbying efforts would be less likely to cut in a single direction and thus less likely to capture government.

THE VIRTUE OF MONOPOLY

Big Tech’s market dominance, some will argue, has benefits: free of constant worries about vicious competition, technology giants can focus on the big questions. They have the time and resources to invest copiously in cutting-edge research, where success is rare but the potential payoff—for technological innovation and thus for U.S. competitiveness and national security—is massive.

Whether or not they say it explicitly, those who want to protect Big Tech from antitrust laws and other regulations are advocating a “national champions” model—a system in which the state shields a few select big companies from competition, allowing them to spend on research and development. But there is strong evidence that this approach is imperfect, at times even counterproductive. As the legal scholar Tim Wu has noted, it is usually competition, not consolidation, that fosters innovation. Competitors have to find ways to differentiate themselves in order to survive and expand. Large, protected firms become lethargic, are slow to innovate, and rest on their laurels.

Recall the race for supremacy in the electronics industry that played out between the United States and Japan in the 1980s. Japan, according to Wu, chose to protect its national champions, giving direct government support to such powerhouses as NEC, Panasonic, and Toshiba. The United States took the opposite tack. Its largest electronics firm at the time, IBM, came under antitrust scrutiny by U.S. authorities, and the ensuing decade-long legal battle discouraged the company from engaging in conduct that might run afoul of antitrust laws. That created the space for a variety of other hardware and software companies, among them Apple, Lotus, and Microsoft, to flourish. Competition led to innovation and the creation of some of the most forward-looking companies of the era.

National champions also have an incentive to hide breakthroughs that might undermine their market power. Bell Labs, one of the pillars of AT&T’s telecommunications empire, has long been celebrated for its role as an “ideas factory.” But Bell Labs and AT&T also suppressed innovations that threatened their business model. Starting in the 1930s, for example, AT&T’s management sat on recording inventions that could have been used for answering machines, for fear this innovation might jeopardize the use of the telephone.

Skeptics might argue that this time is different—that today’s next-generation technologies are so resource-intensive that smaller companies in a competitive environment couldn’t afford the necessary investments. But even if broken up and regulated, Big Tech’s main players would have considerable money left to spend on AI, robotics, quantum computing, and other next-generation technologies. Facebook would still have billions of users without Instagram and WhatsApp. Amazon’s platform would still have enormous market power in online sales even if it wasn’t allowed to produce its own products.

Whatever resource constraints did arise could be offset by greater public investment in R & D. As the economist Mariana Mazzucato has argued, such government spending has historically been a significant driver of innovation; the Internet, for example, began as a U.S. Defense Department network. There is no reason the government could not play the same role today.

Unlike research by national-champion firms, research funded by public investment would not be tied to the profit motive. It could therefore cover a wider range of subjects, extend to basic research that does not have immediate or foreseeable commercial applications, and include research that might challenge the incumbency and business models of existing companies. Public research could also de-emphasize areas of inquiry that may be profitable but are socially undesirable. For many of the biggest technology companies, surveillance, personalized targeting, and the eliciting of particular behavioral responses lie at the heart of their business models, which means that their efforts to innovate are geared in no trivial way toward improving those tactics. An authoritarian country may see those as valuable public goals, but it is not at all clear why a free and democratic society should.

Public investment in R & D also has the potential to spread the benefits of technology, innovation, and industry throughout the United States. At present, much of the country’s technological and innovative prowess is concentrated in a few hubs—the most prominent being Northern California, Seattle, and Boston. This is not surprising, as unlike the government, technology companies have no reason to want to spread development evenly. Amazon’s competition to decide the location of its second headquarters is a good example. After inviting countless pitches from cities across the country and much public attention, the company settled on New York and Washington, D.C.—two cities that hardly need an economic boost. Public investment, as the economists Jonathan Gruber and Simon Johnson have argued, could remedy these geographic imbalances and spur successful economies in dozens of midsize cities all over the country, with spillover benefits for their regions.

Mountains of data are needed to improve AI’s precision and accuracy, and some might think that only Big Tech can collect and handle data in such vast quantities. But this need not be the case, either. The United States could create a public data commons with data collected from a variety of government sources (and regulate it with strict rules about personal privacy), for use by businesses, local governments, and nonprofits to train machines. Any new data would be fed back into the data commons, allowing the quality and quantity of the information to improve over time. Alternatively, the government could require technology companies to make their data available in interoperable formats. If those companies effectively have monopoly power over data, then they could be regulated as monopolies—with public access to the data sets as a condition for their continued protection as monopolies. No legal obstacles stand in the way of these options, and both would enable innovation and expand the number of players working on important technological developments.

SQUEEZING THE GOVERNMENT

For the moment, such public initiatives exist only as proposals. Big technology companies have considerable market power, and the U.S. government increasingly relies on their services, including to run its national security apparatus. Technology is, of course, a crucial aspect of warfare, and firms such as Amazon and Microsoft have contracts to provide cloud services to U.S. defense and intelligence agencies. These technology companies are fast becoming part of the United States’ defense industrial base—the collection of industries that are indispensable for U.S. military equipment. As they do so, the curse of monopoly capitalism that already affects the country’s overconsolidated defense sector—causing higher costs, lower quality, reduced innovation, and even corruption and fraud—will likely grow worse.

To see the challenge ahead, consider the present state of the U.S. weapons industry, which is already remarkably uncompetitive. In 2019, the Government Accountability Office found that 67 percent of 183 contracts for major weapons systems did not have a competitive bidding process. Almost half the contracts went to one of five companies—a stunning testament to the dominance of a handful of firms. And in 2018, the Defense Department released a report on the military’s supply chain that listed numerous items for which only one or two domestic companies (and in some cases none) produced the essential goods. Perhaps most striking of all, the report found that the United States no longer had the capacity to build submarines on a rapid timetable because of single suppliers and declining competition.

Unsurprisingly, as Frank Kendall, a former head of acquisitions at the Pentagon, has pointed out, large defense contractors “are not hesitant to use this power for corporate advantage.” In a recent article in The American Conservative, the researchers Matt Stoller and Lucas Kunce argue that contractors with de facto monopoly at the heart of their business models threaten national security. They write that one such contractor, TransDigm Group, buys up companies that supply the government with rare but essential airplane parts and then hikes up the prices, effectively holding the government “hostage.” They also point to L3 Technologies, a defense contractor with ambitions, in the words of its one-time CEO, to become “the Home Depot of the defense industry.” According to Stoller and Kunce, L3’s de facto monopoly over certain products means that it continues to receive lucrative government contracts even after it admitted in the settlement of a 2015 civil fraud lawsuit that it had knowingly supplied defective weapons sights to U.S. forces.

As technology becomes more integral to the future of U.S. national security, Big Tech’s market power will likely lead to much the same problems. Technology behemoths will amass defense contracts, and the Pentagon will be locked into a state of dependence, just as it is currently with large defense contractors. Instead of healthy innovation, the government will have created what Michael Chertoff, a former homeland security secretary, has called a “technological monoculture,” which is unwieldy and vulnerable to outside attack. The cost to taxpayers will increase, whether due to higher prices or fraud and corruption, and much of their money—funding that could have been available for innovation—will become monopoly profits for technology executives and shareholders.

#### 2. Dynamism---only by ensuring lagging incumbents AND potential entrants can compete will lock-in any productivity gains.

James Manyika & Michael Spence 21, Chair and Director of the McKinsey Global Institute; Philip H. Knight Professor and Dean Emeritus at Stanford University's Graduate School of Business, "A Better Boom: How to Capture the Pandemic’s Productivity Potential," Foreign Affairs, Vol. 100, No. 4, August 2021, HeinOnline. language edited.

The pandemic did more than temporarily [freeze] ~~paralyze~~ the global economy, however. It spurred businesses in practically every sector to radically rethink their operations, often accelerating plans for technological and organizational innovation that were already in the works. Overwhelmingly, firms adopted new digital technologies that enabled them to continue doing business even under severe coronavirus restrictions. The result was a profound economic transformation, one that has hastened the potential for productivity gains even in sectors that have historically been slow to change. In health care, for example, telemedicine had long promised new efficiencies and added value, but it was not until the COVID-19 crisis that it took off. In retail, with the exception of e-commerce players, firms had been slow to adopt digital sales strategies, doing so mostly as a way to complement Main Street retailing. That changed rapidly with the pandemic.

Surprising as it may seem, out of the deepest economic crisis since World War II could come a new era of productivity gains and prosperity. Whether that happens will depend largely on the decisions that governments and businesses make as they prepare to exit the pandemic in the coming months. In the short and medium term, the prospects for increased productivity—and prosperity—are encouraging, as the United States and other countries spend heavily on economic recovery and businesses reap the benefits of digitization. But the outlook is less optimistic over the long term, since governments cannot spend indefinitely and consumer and investment spending may not fill the gap.

Governments and businesses must therefore seek to create the conditions for sustained productivity growth and prosperity, in particular by facilitating the diffusion of technological and organizational innovations and bolstering consumer demand. Out of a major global crisis could come a major jolt of productivity growth—but only if policymakers and business leaders make the most of this moment.

THE PRODUCTIVITY PARADOX

The history of productivity growth can be understood as a succession of technological revolutions, from the steam engine to the computer. Each offered the promise of accelerated productivity and economic growth, and each eventually delivered. But there has often been a delay between innovation and adoption, and another between adoption and economic impact. The economist Robert Solow summed up these apparent discrepancies in a 1987 article in The New York Times Book Review, writing, “You can see the computer age everywhere but in the productivity statistics.” His formulation became known as “the Solow paradox.”

But then came the revolution in information and communication technologies between 1995 and 2005, a decade in which the Solow paradox was temporarily resolved. Widespread adoption of these technologies was accompanied by a simultaneous acceleration in productivity, which grew at an annualized rate of 2.5 percent in the United States, a full percentage point faster than the rate between 1970 and 1995. Companies invested heavily in information and communication technologies and reorganized their operations and managerial practices around them. They did so out of the desire to gain a competitive edge, but also because of relatively robust consumer demand for their products.

Productivity growth accelerated in several sectors as a result, driving growth in the U.S. economy as a whole. This period was characterized by an unusual combination of large spurts in productivity growth in a few big sectors employing many workers, such as retail and wholesale, and even larger productivity growth in smaller sectors, such as those that produced computers and electronic products. In both big and small sectors, there was a virtuous cycle of employment growth to meet demand and even faster growth in the value of the output from these sectors. The value of outputs across all sectors of the economy grew by 3.4 percent per year between 1995 and 2005, whereas the total number of hours worked grew by only 0.9 percent per year.

But the boom did not last. Between 2005 and 2019, annual productivity growth in the United States fell by more than half, to 1.0 percent. In the aftermath of the 2008 global financial crisis, from 2010 to 2019, it was even lower, at 0.6 percent. Unlike the United States, European countries had not experienced rapid productivity gains in the 1995–2005 period, but they did experience the postcrisis decline. Between 2010 and 2019, annual productivity growth fell below one percent in France, Germany, and the United Kingdom.

The Solow paradox was back. After a decade of rapid productivity gains, the information technology revolution had reached a point of diminishing returns. But the next wave of technology—the digitization of processes, big data and analytics, cloud computing, the Internet of Things—was not yet ready to fill the gap. Despite early breakthroughs in image recognition and natural language processing, few firms had begun to make use of artificial intelligence technologies, and digitization was proceeding slowly. We estimated, based on a sector-by-sector assessment, that in 2015, the United States had reached only 18 percent of its digital potential and Europe had reached only 12 percent. Moreover, a gap had opened up between the firms that were digital leaders and those that were digital laggards—a gap that other researchers found was correlated with a gap in labor productivity.

This gap in technology adoption was widening at a time of weak consumer demand for goods and services, in large part due to the aftereffects of the financial crisis. Firms scaled back their investments, and fewer new businesses were created. Making matters worse, the share of income that flowed to top earners and the owners of capital increased, while the share that went to labor decreased, further weakening demand.

Across the United States and Europe, the vast majority of sectors experienced declines in productivity growth. Only four percent of all sectors recorded productivity jumps in 2014, compared with an average of 18 percent of sectors that achieved substantial increases in productivity in the previous two decades. Growth in gross value added—a measure of a firm’s or a sector’s contribution to GDP—declined from 3.4 percent annually between 1995 and 2005 to 1.8 percent between 2005 and 2019. Growth in hours worked remained roughly unchanged, at 0.7 percent, throughout both periods.

These two very different periods of economic activity in the United States reveal much about the underpinnings of productivity growth. It stems first and foremost from the widespread adoption of technological innovations, especially general-purpose technologies such as electricity and the Internet. But it also stems from the managerial innovation and reorganization of functions and tasks that occur when firms adopt new technologies. Both of these processes must spur leaps in productivity growth in many sectors, or at least in a few large ones, so that productivity jumps in the economy as a whole. Finally, adoption and reorganization within and across sectors must be driven by competition, which incentivizes firms to innovate and helps spur technological diffusion.

Not all productivity growth is created equal, however. Productivity growth can be achieved through gains in the volume or value of outputs for a given number of hours worked, or it can come about as a result of a reduction in hours worked for a given output. Often both happen at the same time. But it is when the former exceeds the latter that a virtuous cycle is created in which innovation and investment generate growth in employment and wages, which in turn generates demand for increased (or more valuable) output. This is what happened during the period from 1995 to 2005. When the latter source of productivity growth exceeds the former, however, a vicious cycle results in which firms reduce labor costs faster than they grow the volume or value of their outputs, which in turn puts pressure on employment and incomes.

POST-PANDEMIC POTENTIAL

The pandemic has primed advanced economies for another period of rapid productivity growth. It is too early to say for sure whether such growth will be the product of a virtuous or a vicious cycle, but signs point to the former. Despite uncertainty, stress, and plummeting economic activity in the early days of the COVID-19 crisis, many firms boldly deployed and used new general-purpose technology—especially digital technology—in ways that have driven virtuous productivity gains in the past. In October 2020, we surveyed 900 C-suite executives in various sectors and countries and found that many had digitized their business activities 20 to 25 times as fast as they had previously thought possible. Often, this meant shifting their businesses to online channels, since roughly 60 percent of the firms we surveyed experienced a significant increase in customer demand for online goods and services as a result of the pandemic.

Before the pandemic, e-commerce was forecast to account for less than a quarter of all U.S. retail sales by 2024. But during the first two months of the COVID-19 crisis, e-commerce’s share of retail sales more than doubled, from 16 percent to 33 percent. And that growth did not just reflect brick-and-mortar firms setting up shop online for the first time. Firms that were already highly digitized before the pandemic significantly expanded their online capabilities to meet the surge in demand. They also reorganized their operations, including their logistics, to complement what they were doing digitally—for example, by expanding their direct-to-home delivery capabilities.

Businesses also strove to become more efficient and agile. In Europe and North America, nearly half of the respondents to our survey said that they had reduced their operating expenditure as a share of revenue between December 2019 and December 2020. Two-thirds of senior executives said they had increased investment in automation and artificial intelligence, whether to help warehouse and logistics operations cope with higher e-commerce volumes or to enable manufacturing plants to meet surging demand. Many companies used technology to reduce the physical density of their workplaces or to enable contactless service—for instance, by expanding self-checkout in grocery stores and pharmacies and employing online ordering apps for restaurants and hotels. Other businesses, such as meatpacking and poultry plants, accelerated the deployment of robotics to reduce their need for labor. If there was one lesson from the pandemic, it was that digital capability and resilience go hand in hand.

But even as the arrival of vaccines has made it possible to imagine a return to relative normalcy in parts of the developed world, continued digitization and the adoption of other technological innovations promise to deliver still more productivity gains. The largest of these gains—roughly an additional two percentage points per year—could come in the health-care, construction, information technology, retail, pharmaceutical, and banking sectors. In health care, for instance, accelerating the use of telemedicine beyond the pandemic could drive incremental productivity growth for years. According to one recent U.S. poll, 76 percent of patients expressed interest in using telemedicine in the future, and industry experts project that the services for 20 percent of health-care spending could be delivered virtually—up from 11 percent before the pandemic. Other sectors, including automotive, travel, and logistics, show less—but still substantial—potential for productivity growth as a result of more flexible task scheduling, leaner operations, and smarter procurement.

Overall, these innovations and organizational changes could accelerate productivity growth by around one percentage point per year between now and 2024 in the United States and the six large European economies that we analyzed (France, Germany, Italy, Spain, Sweden, and the United Kingdom). This gain would result in a productivity growth rate twice as high as the rate after the 2008 global financial crisis, and in the United States, it would expand per capita GDP by roughly $3,500 by 2024. That would be a stunning outcome, but it will hinge on continued technology adoption by firms and the maintenance of robust demand.

Even more productivity gains could be on the horizon thanks to other advancements. The accelerating revolution in biology, for instance, could transform sectors from health care and agriculture to consumer goods, energy, and materials. Biological innovation has already enabled the rapid development of new vaccines for COVID-19. Equally impressive revolutions in energy could make possible the widespread adoption of solar and wind power, especially in light of recent progress toward better (and cheaper) batteries. Artificial intelligence is also advancing rapidly, but is still a long way from being deployed widely across companies and sectors. When and if that happens, the productivity gains could be enormous.

FOLLOW THE DIGITAL LEADER

Future gains in productivity, even those that boost overall growth, are likely to be uneven. We analyzed metrics that have the potential to unleash future productivity growth—such as research-and-development spending, revenue, capital expenditures (including digital expenses), and mergers and acquisitions—and found that especially in the United States, a small number of large superstar firms accounted for a disproportionately large share of the activity in all these categories. From the third quarter of 2019 to the third quarter of 2020, U.S. superstars (defined as the top ten percent of firms by profit) saw much shallower declines in capital expenditures and revenue than did other companies. During the same period, U.S. superstars spent $2.6 billion more on R & D than they did the previous year, while all other firms spent just $1.4 billion more.

If this investment, innovation, and technology adoption gap between superstars and the rest of the large firms and smaller, less profitable firms persists, any post-pandemic acceleration in productivity growth could fall short of its potential. Small and medium-sized enterprises have been hit disproportionately hard by the COVID-19 crisis. As a result, many of them are unable to make big investments in future productivity and are therefore liable to fall even further behind the superstars. This is what happened in the aftermath of the 2008 global financial crisis, when only a minority of companies achieved productivity growth.

But there is room for cautious optimism about the ability of non-superstars to close some of the gap. Before the pandemic, the superstars tended to be highly digitized and innovative in their managerial approaches, as well as more profitable and resilient. They were therefore better placed to weather and even take advantage of the shock. But as the hardest-hit firms and sectors recover, and as early digital adaptors demonstrate the enormous potential of these technologies, many of the digital laggards could begin to catch up. Indeed, in another survey of executives we conducted in December 2020, about 75 percent of respondents in North America and Europe said they expected investment in new technologies to accelerate substantially between 2020 and 2024, up from 55 percent between 2014 and 2019. This expected uptick was similar across firm sizes.

Another reason for optimism is that in 2020, a year that saw the darkest economic days of the pandemic, 24 percent more new businesses were created in the United States than in 2019. Europe lagged behind the United States on this metric, with new business creation staying roughly flat in 2020 in France, Germany, and the United Kingdom and declining by more than 15 percent in Italy and Spain. If the American increase in business dynamism persists, however, it should contribute to more productivity growth.

Investment, innovation, and technology adoption are only one-half of the virtuous cycle of productivity growth, however. The other half is demand for the expanded output that results—in other words, income growth from increased productivity has to flow to people who will spend that additional money. In the short term, the outlook for demand is good, especially for countries that have made progress toward vaccinating their populations and could be among the first to open up their economies. Pent-up demand and savings from the pandemic could be unleashed all at once, resulting in a strong initial bounce in demand led by consumers. In the United States, President Joe Biden’s $1.9 trillion economic support bill should push demand even higher.

In the medium term, the outlook for demand is also relatively solid, although it will depend on the size, deployment, and longevity of government spending. In the United States, Biden now has set his sights on a large infrastructure package. As his administration shifts its focus from economic relief to investment in productive areas, it could also increase productivity growth by raising demand to match potential supply, creating a high-pressure economy, that is, one with low unemployment and high growth. The outlook in continental Europe, where large-scale government economic support is harder to coordinate, is less certain. Nonetheless, the EU has put in place an unprecedented plan totaling some $900 billion to boost investment in the digital and green energy transitions.

But government spending on this scale will likely be time-limited, making the long-term outlook for demand less rosy. Moreover, long-neglected problems, including the falling share of firms’ income going to workers, rising inequality, and the long-term decline in private investment, could drag down demand. Roughly 60 percent of the post-pandemic productivity gains that we estimate could come from innovations and organizational restructuring—the one percentage point of acceleration per year between now and 2024—would stem from firm-level measures, such as automation, designed to cut labor and other business costs. Unless firms do more to boost the volume or value of their output and help workers transition by acquiring new skills, the drive for efficiency will risk generating productivity gains through a vicious, rather than a virtuous, cycle, undermining wages and jobs and weakening consumption-driven demand and investment.

A NEW AGE OF DYNAMISM?

What can businesses and governments do to capitalize on the positive short- and medium-term outlook for productivity and to improve the long-term outlook? First, they should work to speed up technology adoption and managerial innovation, helping these changes spread within and across sectors. As the recovery begins, firms that have until recently been focused on crisis management and survival should follow the lead of superstar firms by investing in technology and reorganization. The superstars can assist in this process by supporting their broader ecosystems, in particular by doing business with smaller firms that offer complementary products and services. Governments can support the process, as well, by investing in research and development.

Policymakers should also seek to strengthen competition and business dynamism. In a healthy economy, the firms that add the most value prosper and grow, while the firms that add the least value shrink or disappear: so-called creative destruction. Policymakers can revive and reinforce this natural sorting process by revising competition rules, bankruptcy procedures, and product and labor-market regulations.

Governments and businesses should also aim to bolster demand and encourage business investment, the other half of the virtuous productivity cycle. As government spending tapers off, businesses should play their part by creating broad-based revenue growth while also finding efficiencies. Additionally, they should spend more on upgrading the skills of their employees, helping them make the most of technological and organizational innovations while also reducing inequality and unemployment. Governments can incentivize such investments in human capital through tax credits that encourage retraining and by shifting the tax burden away from labor income and toward capital income.

But productivity growth isn’t everything, especially as it is measured and projected today. It does not capture important dimensions of individual and social well-being that may be significantly augmented in the post-pandemic environment. For instance, the spread of digital technologies could foster more inclusive patterns of growth, and telemedicine could deliver timely primary health-care services to millions in the developing world. Nor do measures of productivity growth account for some of the negative externalities associated with modern innovations, which will compound over time and profoundly affect people’s quality of life.

What is perhaps most notable is that productivity as it is currently measured does not account for climate change. To mitigate that risk around the world, significant investment in technologies that make energy greener and more efficient is needed. Some of this investment will increase productivity growth. Electric vehicles, for instance, are not just good for the environment; they also require less labor to produce and so raise productivity. To the extent that energy-efficient investments divert resources and talent away from other, even more potentially productive areas of the economy, they could dampen short-term productivity growth. Over the long term, however, their effect will be positive, since they will prevent a dramatic decline in future productivity, among other catastrophic outcomes. Many of these gains may never be captured by the standard productivity measures, since the gains will represent a downturn that never occurred. But some of the productivity gains could eventually be captured, especially those related to infrastructure designed to help the economy adapt to climate change.

As they prepare to exit the pandemic, governments and businesses alike will have to balance these short- and long-term goals. Yet even now, as COVID-19 continues to exact a human and economic toll, a potential upside appears to be emerging. After years of sluggish productivity and economic growth following the 2008 global financial crisis, COVID-19 has triggered a frenzy of technological and organizational innovation. Whether this frenzy leads to a new age of dynamism will depend on what governments and businesses do to sustain a virtuous cycle of ever-greater productivity.

### 1AC---Realignment ADV

#### Contention 2 is Realignment.

#### The EU is gravitating towards stricter monopoly rules targeted at unilateral exclusion by large technology firms---BUT that creates a legal gap between the EU and US that creates room for diverging enforcement. Only by moving towards alignment AND coordinating with the EC (European Commission) can feasibly solve.

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Acquisitions of Nascent Competitors— A Similar U.S./Non-U.S. Dichotomy

The amount of ink spilled, and Zoom screens filled, on nascent acquisitions is beyond measure. But that does not mean it is easy to predict what the future holds. In fact, the discussions often center as much on purported past agency “mistakes” as on what to do now and going forward. Nor do all jurisdictions have agencies with the power and discretion to reach back and challenge prior nascent acquisitions; and for those that can, they do not all face the same legal standards.

In trying to sort out (below) the nascent acquisition landscape, we find great enthusiasm in the U.S. for fixing lost opportunities from the past—but with an unclear legal path—whereas in the EU merger clearance is final. Nonetheless, for all jurisdictions there is enormous appetite to address nascent acquisitions going forward.

U.S.: Enthusiasm, But What of the Case Law?

As with other areas of enforcement, the U.S. antitrust agencies cannot, absent judicial action, simply break up Big Tech by ordering it to spin off brands and business lines it acquired as start-ups. They must go to court and prove both a statutory violation and that divestiture is the appropriate remedy to restore competition (or that an injunction is the appropriate remedy if the deal is not yet consummated). There is precedent for seeking divestiture of past acquisitions that turn out to be anticompetitive (a subject beyond our scope), but its current application is far from clear. What we highlight here are some of the substantive issues presented under U.S. law for challenging acquisitions of nascent competitors, especially when seeking permanent injunctions or divestitures. These issues, among many others, will be front and center in several of the ongoing litigations.

As a starting point, anticompetitive acquisitions typically are the subject of challenge under Section 7 of the Clayton Act. Section 7 is an incipiency statute; it prohibits mergers whose effect “may be substantially to lessen competition.”21 The original notion was to prohibit anticompetitive mergers before their effects materialize, and to prohibit potentially anticompetitive horizontal, vertical, and conglomerate mergers. Beginning in the late 1970s, however, and continuing more dramatically in the 1980s and forward, the aggressive use of Section 7 was tempered by the agencies and the courts, which feared that the law was [preventing] handicapping efficient mergers. Today, Section 7 is most commonly invoked to challenge horizontal acquisitions of substantial competitors and, at times, vertical acquisitions that may foreclose competition from either upstream or downstream rivals to the harm of consumers. Under current U.S. case law, conglomerate mergers are tough to stop as are (most relevant here) acquisitions of potential competitors—where the target firm is not yet in the market of the acquirer, but may enter, and the market loses the benefit of the entry effect.

For acquisitions involving potential (or future) competition, the Supreme Court in United States v. Marine Bancorporation, Inc. established a tough evidentiary standard: (1) that absent the merger, the potential competitor could enter the market (as a de novo entrant), and (2) that such entry would structurally deconcentrate the market or produce other demonstrable procompetitive effects.22

A present market effect is also required when considering competitors waiting in the wings—the perceived potential competition doctrine. The standard may be a challenge for cases brought under Section 7, and the question now is whether a new line of Section 7 jurisprudence can emerge. For example, could Section 7 apply if a dominant firm forms a policy to acquire all start-ups that it identifies as significant future challengers, and thus builds a moat of protection around its alleged monopoly power? Or could the acquiring firm’s own assessment, prediction, and demonstrable intent provide the requisite inference and proof that each of the acquired start-ups could and would have entered (or expanded) on its own and offered consumer-enhancing rivalry in the market? Could the FTC also make a successful challenge under the more expansive language of Section 5 of the Federal Trade Commission Act? For all of these provocative questions, it will fall to the courts, and maybe eventually to the Supreme Court, to determine the outer boundaries of Section 7.

More immediately, as we see in some of the current litigated cases, the U.S. agencies have decided on a creative mix-and-match theory to challenge acquisitions of nascent competitors, using Section 2 monopolization principles (maintaining monopoly by acquiring competitive threats) for liability, while implicitly invoking Section 7 as the remedial basis for unwinding transactions. Here, the agencies have invoked language in Microsoft:

We may infer causation [of anticompetitive effects] when exclusionary conduct is aimed at producers of nascent competitive technologies as well as when it is aimed at producers of established substitutes . . . . [It] would be inimical to the purpose of the Sherman Act to allow monopolists free reign [sic] to squash nascent, albeit unproven, competitors at will . . . .23

The courts (particularly, now, in the Facebook litigation) will have to decide on the applicability of Microsoft to dominant platform acquisitions of small start-ups.24 On the one hand, courts will need to consider the alleged plan (supported by documents, in the government’s view) to stymie future competition and, on the other hand, the uncertain future of the start-ups at the time of an acquisition as compared with the actual dramatic growth and attractiveness to users of being a part of the platform’s network. While many of these principles are not new, the waters are uncharted in the courts. It will likely take years for the issues to work their way through the U.S. court system, including, in our view, likely action by the Supreme Court.

Finally, in the U.S., in theory there is always a prospect of regulation apart from courts’ antitrust decisions. But the prospect for regulation of acquisitions of nascent competitors is not necessarily rosy; it depends upon political will. Legislation may be especially challenging as the polarized factions of both the Republican and Democratic parties interact with a more moderate Democratic Executive (although one that is being advised by an aggressive progressive, Professor Tim Wu).25 If the politics align, especially with the Democrats’ new ability to garner support for legislation, the prospect of some rulemaking to proscribe dominant firms’ acquisitions of their nascent rivals under some conditions (and with new substantive standards) is not beyond question.

EU/U.K.: An Emerging Prophylactic Approach

Outside of the U.S., the enforcement and regulatory approach to nascent-competitor acquisitions is quite different—in part more restrictive, in part more flexible. On the restrictive side, unlike in the U.S., there is only “one bite at the apple” in the EU for blocking acquisitions with an EU dimension. Once a merger has received clearance from the EU it cannot be investigated again except in exceptional circumstances, such as whether the clearance was based on false or misleading information. This is why many jurisdictions are modifying their merger notification requirements to cover more (if not all) acquisitions by large tech (or other) firms. Equally important, the EU enforcers may not use Article 102 dominance law to block transactions, as the EC Merger Regulation is the exclusive regulatory authority.26 This precludes the hybrid approach currently asserted in the U.S. courts.

The flexibility is in the relative lack of constraining case law and the opportunity to explore new theories and approaches. Specifically, where the U.S. lower courts must grapple with the “potential competition doctrine” and the novelty of using Section 2 to attack consummated acquisitions, the EU and its Member States can explore new enforcement theories with few limiting parameters. Further, unlike with Articles 101 and 102, the Commission’s decisions on mergers are not frequently challenged, and even more rarely reach the Court of Justice. Hence, if the EU believes that a nascent-competitor acquisition by a dominant platform will be anticompetitive under one or more theories of harm, it may pursue that theory, subject to appeal to the General Court and Court of Justice. This provides significant flexibility and enforcement creativity.

Nor are non-U.S. jurisdictions encumbered by the Chicago School conceptions of consumer welfare that prevail in the U.S. (as applied in the merger context). Particularly in the EU and its Member States, therefore, we can anticipate a significant increase in scrutiny of all forms of nascent-competitor acquisitions based on relatively aggressive theories of harm to dynamic competition, coupled, as usual, with vigorous debate over the asserted harm and/or procompetitive justifications for the transaction.

The U.K., however, is likely to take an even more targeted approach to nascent acquisitions, consistent with its broad proposed regulation of large tech platforms. In contrast to the EU (which does not need a regulatory change to its merger review processes to address nascent acquisitions), the CMA has put nascent acquisitions directly in its new regulatory cross hairs. It apparently is more concerned with the growing power of the Big Tech platforms, even if there is a significant (sometimes large) chance that the “but for” competitive threat would never have materialized and the acquisition enhanced the offerings by the platform. As Andrea Coscelli, Chief Executive of the CMA, has highlighted, enforcers in his view need to get comfortable with the notion that the inherent uncertainty of the but-for world is still worth addressing.27 In essence, he is suggesting that competition is better preserved if the agencies take a dynamic and prophylactic approach to nascent acquisitions, a position that would be harder to argue and accept in the U.S. where inherent speculation is frowned upon in the case law both as a matter of liability and in seeking remedies, especially divestiture.

One can also anticipate, or at least prepare for, other jurisdictions to consider similar actions. The concern over nascent acquisitions by large tech firms is a recent and global one,28 and (rightly or wrongly) it appears that outside of the U.S. there may be relative convergence on these more interventionist approaches.

A General Surge in Populism, But Not Uniformity in Approach

Independently of a particular focus on tech platforms (and, primarily, the challenge of dealing with network effects), there is a drumbeat in the U.S. and elsewhere for more aggressively enforcing (or modifying) competition laws to address industry concentration and the power of individual firms.29 Whether referred to as Neo-Brandeisian or populism from a pre-Chicago School age, the thrust is similar: highly concentrated markets are said to lead to relatively higher corporate profits, wage disparity, barriers to entry, and decreased competitive opportunity. To address these perceived problems, the view is that antitrust needs to remove the constraints of a standard that proscribes only short-run, output-limiting, and price-raising conduct. Many in this group (whom we describe as Progressives) embrace a consumer welfare standard, but would apply it much more broadly and aggressively than conservatives.

Others (Neo-Brandeisians) would use consumer interests as one important focus of antitrust, but would widen the lens to consider exploitation of workers (beyond efficiency concerns), sustainability, inequality, and their perspective on democracy (freedom from business power that controls our lives). Moreover, their set of values leads to a policy position, sometimes more symbolic than actual, that seeks to break up Big Tech. For any of these objectives, particularly in the U.S., the question remains what is practical or feasible. Outside of the U.S., the more fundamental question is whether the Neo-Brandeisian debate is relevant given that in many jurisdictions competition law already is geared to control perceived power (although breaking up Big Tech has not seemed to be the first-line remedy).

In the U.S., the same limitations on case law/potential legislation dynamics are at play as with tech platforms, which may make the more aggressive proposals more aspirational than realistic. Every potential cause of action has its long-defined elements, and the consumer welfare standard that permeates theories of harm only has so much flexibility. For example, “abusive pricing” or “unequal bargaining positions” cannot be independent violations in the U.S.—separate exclusionary conduct would need to be present. Likewise, even in the merger space, market definition remains a requisite element that is probably not going to be jettisoned under current case law; whether concentration thresholds are likely to be reduced or burdens of proof shifted is a different question. For all of these long-established U.S. cases and theories, absent legislation, changes will be around the edges and incremental, as courts continue to determine how robustly the U.S. antitrust goals can accommodate such values as innovation, quality, and dynamic competition without crossing the boundaries into unreliable speculation.

While this continued iterative judicial process may add some flexibility under Section 2 and Section 7 (subject to the Supreme Court’s view), these limits will have significant effect. In the view of many, Section 5 of the Federal Trade Commission Act may have more flexibility if the FTC chooses to use it. But true “progressive” developments in the U.S. would require new legislation.

Looking forward, the House is likely to offer piecemeal legislation addressing specific areas of conduct or desired changes in the law.30 But the main focus for anticipated action should be on the Senate, as the new makeup of the Senate will likely shift the focus away from the aspirational House Majority Staff Report and onto the Senate Judiciary Subcommittee on Antitrust and Commerce, led by Senator Amy Klobuchar. Indeed, on February 4, 2021, Senator Klobuchar introduced a bill—the Competition and Antitrust Law Enforcement Reform Act—that would significantly modify Section 7 on mergers and Section 2 on monopolies (though not seeking to break up Big Tech).31 On mergers, the Act would forbid mergers that “create an appreciable risk of materially lessening competition,” where “materially” can be anything more than “de minimis.”32 It would also shift the burden of proof to the parties to disprove those effects for mergers that significantly increase concentration, involve nascent acquisitions by dominant firms (e.g., greater than 50 percent share), or involve mega mergers (over 5 billion dollars).33

As to unilateral conduct, the Act would expressly prohibit “exclusionary conduct,” defined to include any conduct that materially disadvantages competitors and presents an “appreciable risk of harming competition.”34 Again, this adopts a much more prophylactic approach than Section 2. On its face, the Act would appear to overturn Trinko, bring leveraging back into play (as well as a fairly open-ended theory of raising rivals’ costs), much like what we see in practice in the EU and elsewhere. Whether Senator Klobuchar’s bill will garner the needed votes (likely requiring 60) is hard to predict at this stage, but the general anger and frustration among some Republicans toward Big Tech (again, often concerning asserted platform-related censorship) may put many of them in a receptive frame of mind. From a competition policy perspective, and as Senate hearings begin on potential legislation, it is clear that Senator Mike Lee is the figure to follow on the Republican side.35

U.K./EU: More Flexibility, But How Far To Go?

In contrast to the U.S., other jurisdictions have significant flexibility in addressing whether and to what extent they wish to pursue a more progressive agenda for antitrust policy and enforcement. At least as it relates to economic objectives (and the consumer-welfare debate), the EU and some Member States have made their more progressive agenda clear for some time. Executive Vice President and Commissioner Vestager has elaborated on the EU’s digital-economy agenda on the global stage.

Hence, we have long seen from the EU Commission a commitment to interpreting Articles 101 and 102 in ways that promote non-discrimination among Member States, transparency for consumers, opportunities for new entrants and rivals, and no reluctance to invoke fairness in the application of competition principles. Again, this is largely baked into the Treaty itself. And what we see in the tech space, as well as other areas involving more complex markets (e.g., pharma, IP-driven industries), is the EU and Member States trying to figure out how best to apply these principles to the digital age and other complex industries, while still allowing firms to enjoy the benefits of scale and efficiencies. Sometimes the factors will all point in the same direction; but often it will be a delicate balance. Either way, as the EU continues to pursue its enforcement objectives, the debate will continue—and it will not slow down.

Finally, with the relative constraints of U.S. law and enforcement discretion, the future holds only a limited opportunity for convergence between Section 2 of the Sherman Act and TFEU Article 102, with perhaps a greater prospect in addressing mergers under Section 7 of the Clayton Act and the EU Merger Regulation. There is, however, a significant opportunity for an increase in multi-jurisdictional cooperation and coordination, especially as it relates to truly global “mega-mergers” as well as remedies. In this respect, the OECD and ICN are promoting increased cooperation among agencies. A joint OECD/ICN report on the state of international cooperation was presented at the last OECD Competition Committee in December 2020, and this is an area in which the ICN and OECD could make significant strides in the coming years, especially as non-U.S. enforcement continues to converge.36

Socio-Political Objectives: Needed Coordination and Bold Leaders

Beyond the narrowly focused debate that tends to center on the U.S. version of the consumer-welfare standard, there is a broader view of antitrust that is gaining significant traction in several parts of the globe. In the U.S., it is sometimes difficult to see competition law and enforcement evolving beyond the current case law and its free market underpinnings—each based in part on markets that generally work well, on the absence of a history of state-owned enterprise, and perhaps on a certain faith in the purity and continuity of antitrust. But for many other countries, there is an equal and growing pull from two other perspectives: first, industrial policy, recognizing a government role in partnering with industries—or prohibiting or commanding certain behaviors—ideally to the benefit of all marketplace constituents; and second, socio-political objectives as values of or constraints on antitrust, including concerns as wide ranging as sustainability and distributional equality.37 While inclusion of these considerations may be anathema to some (particularly those of the strictest Chicago-School persuasion), the future of global antitrust rightly highlights where these policies are embraced and gaining traction.

The Pandemic: A Need for Global Coordination

Along with the many other lessons to be learned from the enormous tragedy of the global pandemic, one must be that antitrust as usual is not necessarily optimal in a time where there is a critical need for certain types of supplies, innovation, and collaboration. Moreover, for global pandemics, there is the obvious question of how global market coordination can best be effectuated to meet legitimate and demonstrable needs of suppliers and consumers without creating long-term adverse effects on particular markets or consumers.

What we have learned, however, is that different jurisdictions were equipped differently—or not at all—to make antitrust-related adjustments for pandemic conditions. In the U.S., for example, there certainly was discussion, within cases or investigations, of a greater emphasis on “changing market conditions” and “failing/flailing” firm arguments to justify certain collaborations or mergers. While the authorities were open to business review consultation, for the most part the U.S. antitrust analysis was, and remains, ill-equipped to adjust for such events (although in an analogous war footing, past courts have modified antitrust analysis, though with arguably questionable justification and effect). Looking to the future, one naturally asks—as one of the authors has—whether it is not advisable to address the next pandemic with a global, ex ante industrial organization strategy rather than the piecemeal response that we saw in 2020 and that persists today? 38 Given the effect of the pandemic on both lives and markets across the globe, such an effort should have few serious detractors.

#### Those disputes trigger digital protectionism between the US and EU---BUT convergence must happen soon.

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IV. The way ahead: Convergence or divergence?

So far, this article presented how the differences between the American and European approaches to data protection provide EU regulators with motivation to strengthen antitrust enforcement in data markets. Moreover, it argued that once this process starts, the unique features of European antitrust policy will prove a perfect incubator, so that antitrust cases against US tech companies for dominance violations should grow. Americans do not share and may not understand neither the motivation nor the antitrust tools employed in the EU. 110 As the Atlantic divide on antitrust enforcement widens (and given that actual protectionist policies are on the rise) 111 calls of digital protectionism should afloat. Tensions run both ways, as Europeans may also be startled by American complaints against what they see as a regular application of the rule of law. 112

With a trade war between the EU and the US looming after a series of trade sanctions, 113 increased strains between two of the world's leading trade and security partners can do little good. 114 The digital economy is a sensitive area and the EU/US safe harbour for data transfer is proof of the damage that may arise from disputes. The first Safe Harbor came after a major trade conflict between the EU and the US over personal data. 115 By striking it down, EU Courts' placed thousands of American and European companies in disarray, 116 reason why business leaders in both jurisdictions welcomed the swift conclusion of the Privacy Shield. 117 The challenge remains, however, on whether it is desirable or possible to bridge such significant cultural differences, or at least develop clear mechanisms that prevents tensions arising from pure misunderstanding.

This remains a contingent question. On one side, convergence may never be necessary. It is perfectly reasonable and may even be optimal that different legal systems will provide different solutions to challenges of a new internet era, forcing agents to adapt to the norms of a given jurisdiction. 118 Lack of convergence is burdensome and may increase the cost of doing business across the Atlantic, 119 but the so far successful implementation of the 'right to be forgotten' experience in Europe demonstrates that both markets are large enough to justify companies adopting different solutions. The risk is that shifts in market behaviour may lead to the 'Brussels' effect' and the export of stricter standards, 120 something that may trigger unpredictable reactions by US authorities facing loss of sovereignty.

On the other, the safe harbour demonstrates how convergence is possible if parties move to bridge differences. As there is more to explore from an academic perspective in this second scenario, this section will focus on that. Bringing together such disparate regimes will require both political motivation and a coherent framework. This part argues that: (i) convergence efforts will require a balancing of the role that economics plays in antitrust enforcement on internet markets on both sides of the Atlantic; and (ii) that recent EU reforms open a window of opportunity for this to happen. In addition, it presents data portability as a mitigating measure that companies may explore to decrease tensions while and if converge does not take place.

#### Close EU-US tech cooperation is crucial to good governance, AND averting internet balkanization.

Juraj Majcin 21, PhD International Law, Graduate Institute, Geneva. Member, GeoTech Action Council, "EU-US tech cooperation: Strengthening transatlantic relations in data-driven economies," Atlantic Council, 06/16/2021, https://www.atlanticcouncil.org/blogs/geotech-cues/eu-us-tech-cooperation/.

First, the global economy and international trade have become increasingly data driven. According to the report on the future of international trade launched by the World Trade Organization in 2018, the growing digitalization of the global economy will impact international trade in three significant ways: the importance of cross-border data flows as a component of trade in goods and services will grow significantly in the coming years.; trade in digitizable goods (e.g. DVDs or physical books) will decline while trade in digital services such as streaming services and e-books will grow; and regulation of data flows and other technology legislation will become an important source of comparative advantage. Therefore, adopting an agreement on transatlantic data flows is indispensable to adapt the normative framework that governs the EU-US trade relations to the new data-based reality.

Second, innovation in the transformative technologies of the Fourth Industrial Revolution (e.g. artificial intelligence and cloud computing) requires a vast amount of data from various sources. As a consequence, countries and businesses that have access to large pools of data are more competitive than those that do not. Currently, China is often referred to as a country with access to almost infinite datasets while having data protection rules focused on national security rather than individual rights. This gives Chinese companies an enormous advantage over their European and American competitors in the development of AI and other technologies. Therefore, an agreement facilitating the exchange of data across the Atlantic via a secure and privacy-respecting framework may increase the competitiveness of both European and American companies in the global economy.

Third, authoritarian states such as Russia or China promote an illiberal, techno-nationalist vision of global governance based on harsh restrictions on cross-border data flows with little respect for fundamental human rights. Even more troubling is that these states export their vision of tech governance to developing countries by selling their technology and providing training programs on surveillance and other repressive techniques. They are also highly active at the multilateral level. China, for instance, promotes its approach to internet regulation as an alternative to the current internet architecture via various standardization fora and strategic documents such as China Standards 2035 or the new IP protocol proposed by China to the International Telecommunications Union (ITU). For this reason, by establishing a transatlantic framework on data governance that would ensure free flow of data while protecting human rights, the EU and United States would reiterate their commitment to free internet and set a global standard for other countries to follow.

Fourth, the COVID-19 pandemic has shown how crucial it is for governments to have well-functioning, speedy, and secure access to data of different types and origin. By using data modeling and AI technologies, public authorities can predict with greater accuracy the evolution of different public emergencies as well as long-term threats and thus adopt better informed, more precisely targeted policies. This will be of particular importance to refine societal adaptation capacity and resilience to climate change in a wide array of fields, ranging from agriculture to urban planning to public health. Secure data sharing between the US and European publics as well as research authorities may help significantly in this endeavor. However, to tackle the most pressing global issues such as global pandemics or climate change, the United States and the European Union need a data sharing framework that extend beyond the transatlantic space. Therefore, it is crucial that the EU and United States find agreement on the creation of a safe, rights-based data exchange framework that would foster the connection between experts and research institutions from other global players such as China, India, or Brazil.

#### That collapses global internet openness---extinction.

Lee C. Bollinger 13, President of Columbia University in New York City and a Member of the Faculty of the Law School, Graduate of the University of Oregon and Columbia Law School, and Julius Genachowski, Former FCC Chair, JD from Harvard Law School, Managing Director at The Carlyle Group, “The Plot to Block Internet Freedom”, Foreign Policy, 4/16/2013, https://foreignpolicy.com/2013/04/16/the-plot-to-block-internet-freedom/

The Internet has created an extraordinary new democratic forum for people around the world to express their opinions. It is revolutionizing global access to information: Today, more than 1 billion people worldwide have access to the Internet, and at current growth rates, 5 billion people — about 70 percent of the world’s population — will be connected in five years.

But this growth trajectory is not inevitable, and threats are mounting to the global spread of an open and truly "worldwide" web. The expansion of the open Internet must be allowed to continue: The mobile and social media revolutions are critical not only for democratic institutions’ ability to solve the collective problems of a shrinking world, but also to a dynamic and innovative global economy that depends on financial transparency and the free flow of information.

The threats to the open Internet were on stark display at last December’s World Conference on International Telecommunications in Dubai, where the United States fought attempts by a number of countries — including Russia, China, and Saudi Arabia — to give a U.N. organization, the International Telecommunication Union (ITU), new regulatory authority over the Internet. Ultimately, over the objection of the United States and many others, 89 countries voted to approve a treaty that could strengthen the power of governments to control online content and deter broadband deployment.

In Dubai, two deeply worrisome trends came to a head.

First, we see that the Arab Spring and similar events have awakened nondemocratic governments to the danger that the Internet poses to their regimes. In Dubai, they pushed for a treaty that would give the ITU’s imprimatur to governments’ blocking or favoring of online content under the guise of preventing spam and increasing network security. Authoritarian countries’ real goal is to legitimize content regulation, opening the door for governments to block any content they do not like, such as political speech.

Second, the basic commercial model underlying the open Internet is also under threat. In particular, some proposals, like the one made last year by major European network operators, would change the ground rules for payments for transferring Internet content. One species of these proposals is called "sender pays" or "sending party pays." Since the beginning of the Internet, content creators — individuals, news outlets, search engines, social media sites — have been able to make their content available to Internet users without paying a fee to Internet service providers. A sender-pays rule would change that, empowering governments to require Internet content creators to pay a fee to connect with an end user in that country.

Sender pays may look merely like a commercial issue, a different way to divide the pie. And proponents of sender pays and similar changes claim they would benefit Internet deployment and Internet users. But the opposite is true: If a country imposed a payment requirement, content creators would be less likely to serve that country. The loss of content would make the Internet less attractive and would lessen demand for the deployment of Internet infrastructure in that country.

Repeat the process in a few more countries, and the growth of global connectivity — as well as its attendant benefits for democracy — would slow dramatically. So too would the benefits accruing to the global economy. Without continuing improvements in transparency and information sharing, the innovation that springs from new commercial ideas and creative breakthroughs is sure to be severely inhibited.

To their credit, American Internet service providers have joined with the broader U.S. technology industry, civil society, and others in opposing these changes. Together, we were able to win the battle in Dubai over sender pays, but we have not yet won the war. Issues affecting global Internet openness, broadband deployment, and free speech will return in upcoming international forums, including an important meeting in Geneva in May, the World Telecommunication/ICT Policy Forum.

The massive investment in wired and wireless broadband infrastructure in the United States demonstrates that preserving an open Internet is completely compatible with broadband deployment. According to a recent UBS report, annual wireless capital investment in the United States increased 40 percent from 2009 to 2012, while investment in the rest of the world has barely inched upward. And according to the Information Technology and Innovation Foundation, more fiber-optic cable was laid in the United States in 2011 and 2012 than in any year since 2000, and 15 percent more than in Europe.

All Internet users lose something when some countries are cut off from the World Wide Web. Each person who is unable to connect to the Internet diminishes our own access to information. We become less able to understand the world and formulate policies to respond to our shrinking planet. Conversely, we gain a richer understanding of global events as more people connect around the world, and those societies nurturing nascent democracy movements become more familiar with America’s traditions of free speech and pluralism.

That’s why we believe that the Internet should remain free of gatekeepers and that no entity — public or private — should be able to pick and choose the information web users can receive. That is a principle the United States adopted in the Federal Communications Commission’s 2010 Open Internet Order. And it’s why we are deeply concerned about arguments by some in the United States that broadband providers should be able to block, edit, or favor Internet traffic that travels over their networks, or adopt economic models similar to international sender pays.

We must preserve the Internet as the most open and robust platform for the free exchange of information ever devised. Keeping the Internet open is perhaps the most important free speech issue of our time.

#### Specifically---disease, disasters, resource depletion and black swans.

Dr. David Eagleman 10, PhD in Neuroscience from Baylor University, Adjunct Professor of Neoroscience at Stanford University, Former Guggenheim Fellow, Director of the Center for Science and Law, BA from Rice University, “Six Ways The Internet Will Save Civilization”, Wired Magazine, 11/9/2010, https://www.wired.co.uk/article/apocalypse-no

Many great civilisations have fallen, leaving nothing but cracked ruins and scattered genetics. Usually this results from: natural disasters, resource depletion, economic meltdown, disease, poor information flow and corruption. But we’re luckier than our predecessors because we command a technology that no one else possessed: a rapid communication network that finds its highest expression in the internet. I propose that there are six ways in which the net has vastly reduced the threat of societal collapse.

Epidemics can be deflected by telepresence

One of our more dire prospects for collapse is an infectious-disease epidemic. Viral and bacterial epidemics precipitated the fall of the Golden Age of Athens, the Roman Empire and most of the empires of the Native Americans. The internet can be our key to survival because the ability to work telepresently can inhibit microbial transmission by reducing human-to-human contact. In the face of an otherwise devastating epidemic, businesses can keep supply chains running with the maximum number of employees working from home. This can reduce host density below the tipping point required for an epidemic. If we are well prepared when an epidemic arrives, we can fluidly shift into a self-quarantined society in which microbes fail due to host scarcity. Whatever the social ills of isolation, they are worse for the microbes than for us.

The internet will predict natural disasters

We are witnessing the downfall of slow central control in the media: news stories are increasingly becoming user-generated nets of up-to-the-minute information. During the recent California wildfires, locals went to the TV stations to learn whether their neighbourhoods were in danger. But the news stations appeared most concerned with the fate of celebrity mansions, so Californians changed their tack: they uploaded geotagged mobile-phone pictures, updated Facebook statuses and tweeted. The balance tipped: the internet carried news about the fire more quickly and accurately than any news station could. In this grass-roots, decentralised scheme, there were embedded reporters on every block, and the news shockwave kept ahead of the fire. This head start could provide the extra hours that save us. If the Pompeiians had had the internet in 79AD, they could have easily marched 10km to safety, well ahead of the pyroclastic flow from Mount Vesuvius. If the Indian Ocean had the Pacific’s networked tsunami-warning system, South-East Asia would look quite different today.

Discoveries are retained and shared

Historically, critical information has required constant rediscovery. Collections of learning -- from the library at Alexandria to the entire Minoan civilisation -- have fallen to the bonfires of invaders or the wrecking ball of natural disaster. Knowledge is hard won but easily lost. And information that survives often does not spread. Consider smallpox inoculation: this was under way in India, China and Africa centuries before it made its way to Europe. By the time the idea reached North America, native civilisations who needed it had already collapsed. The net solved the problem. New discoveries catch on immediately; information spreads widely. In this way, societies can optimally ratchet up, using the latest bricks of knowledge in their fortification against risk.

Tyranny is mitigated

Censorship of ideas was a familiar spectre in the last century, with state-approved news outlets ruling the press, airwaves and copying machines in the USSR, Romania, Cuba, China, Iraq and elsewhere. In many cases, such as Lysenko’s agricultural despotism in the USSR, it directly contributed to the collapse of the nation. Historically, a more successful strategy has been to confront free speech with free speech -- and the internet allows this in a natural way. It democratises the flow of information by offering access to the newspapers of the world, the photographers of every nation, the bloggers of every political stripe. Some posts are full of doctoring and dishonesty whereas others strive for independence and impartiality -- but all are available to us to sift through. Given the attempts by some governments to build firewalls, it’s clear that this benefit of the net requires constant vigilance.

Human capital is vastly increased

Crowdsourcing brings people together to solve problems. Yet far fewer than one per cent of the world’s population is involved. We need expand human capital. Most of the world not have access to the education afforded a small minority. For every Albert Einstein, Yo-Yo Ma or Barack Obama who has educational opportunities, uncountable others do not. This squandering of talent translates into reduced economic output and a smaller pool of problem solvers. The net opens the gates education to anyone with a computer. A motivated teen anywhere on the planet can walk through the world’s knowledge -- from the webs of Wikipedia to the curriculum of MIT’s OpenCourseWare. The new human capital will serve us well when we confront existential threats we’ve never imagined before.

Energy expenditure is reduced

Societal collapse can often be understood in terms of an energy budget: when energy spend outweighs energy return, collapse ensues. This has taken the form of deforestation or soil erosion; currently, the worry involves fossil-fuel depletion. The internet addresses the energy problem with a natural ease. Consider the massive energy savings inherent in the shift from paper to electrons -- as seen in the transition from the post to email. Ecommerce reduces the need to drive long distances to purchase products. Delivery trucks are more eco-friendly than individuals driving around, not least because of tight packaging and optimisation algorithms for driving routes. Of course, there are energy costs to the banks of computers that underpin the internet -- but these costs are less than the wood, coal and oil that would be expended for the same quantity of information flow.

The tangle of events that triggers societal collapse can be complex, and there are several threats the net does not address. But vast, networked communication can be an antidote to several of the most deadly diseases threatening civilisation. The next time your coworker laments internet addiction, the banality of tweeting or the decline of face-to-face conversation, you may want to suggest that the net may just be the technology that saves us.

#### The plan harmonizes divergences resulting from weak US conduct law---AND, it rejuvenates US leadership in antirust.

Eleanor M. Fox 19, Walter J. Derenberg Professor, Trade Regulation, New York University School of Law, "Platforms, Power, and the Antitrust Challenge: A Modest Proposal to Narrow the U.S.-Europe Divide," Nebraska Law Review, Vol. 98, No. 297, 2019, Lexis.

Like the U.S., the EU went through two important phases with regard to the question: When is single-firm conduct anticompetitive? [\*303] In the first stage, EU law was formalistic. The law was aggressive against dominant-firm conduct that excluded rival firms. It contained a broad presumption against exclusive contracts by dominant firms. The second phase came in the 1990s, and, even more dramatically, in the first decade of the new millennium. This was epitomized by the European Commission's 2009 guidance paper on dominant firm conduct. 15In this second phase and in the guidance paper, the European Commission adopted, and the courts followed, a more economic approach. 16While incorporating economic analysis into the law, Europe retained certain guiding principles and approaches reflecting the place of antitrust in the Treaty. These approaches include that EU law is about community and integration. EU competition law is sympathetic with EU internal market free-movement law, which stresses the importance of free movement of goods, services and people across Member State lines. Likewise, EU law is antagonistic to Member State restraints and the privileges states grant to favored firms. Such restraints and privileges are distortions of competition. Both aspects - respect for free movement and antagonism to state restraints - are imported into EU competition law and specifically into abuse of dominance law. EU competition law stresses market access and the right of firms to contest markets on the merits. It is sympathetic to firms' access to networks. 17It is hostile to dominant firms' use of leverage to take advantages for themselves at the expense of competitors, thereby unleveling the playing field. EU competition law does not aim to protect inefficient competitors, but rather its precedents forge a clearer path for firms to access markets on their merits, free from obstructions by dominant firms. Still, detractors (including many in the U.S. antitrust community) contend that the EU excessively enforces its antitrust law against dominant firms (often American ones), and insist that the EU approach does protect competitors at the expense of consumers.

[\*304]

C. Presumptions and Divergences

EU competition law adopted its more economic approach nearly two decades ago. However, it never adopted the "Chicago School" premises. It does not assume markets work well. It does not admonish us to trust the market - especially not when the market is concentrated and dominated by a single firm. It does not presume that antitrust intervention is likely to mess up the market and chill competition and innovation. Its teaching implies a belief that lowering barriers to entry and keeping a clear path for challengers is likely to make the market more dynamic and thus serve consumers better. When dealing with innovation incentives, U.S. cases are likely to assume that antitrust action against a dominant firm will chill the firm's incentives to invent, 18 while EU law is more likely to find that the dominant firm's challenged conduct will chill the outsiders' incentives to invent. EU cases have documented this lost innovation. 19 U.S. competition law abhors duties of dominant firms to deal with competitors, calling such duties "forced sharing" and undermining incentives to invent. 20EU law applies a contrary principle: dominant firms, especially firms with power in one market that compete in an adjacent market, have a special responsibility not to impair rivals' competition on the merits. 21

Both jurisdictions aim to preserve and facilitate sustainable low pricing even if it displaces firms that cannot keep up with the competition. U.S. law, however, makes it harder than EU law to successfully challenge below-cost pricing. U.S. law requires the plaintiff to prove a probable recoupment scenario - that is, after the predatory siege, defendant must be likely to recover its losses by charging monopoly [\*305] prices high enough and long enough. 22EU law does not require proof of probable recoupment. 23It is enough that the predator thought the scheme was worth it. Because of the strict U.S. requirements, predatory pricing violations are virtually never proved under U.S. law.

Apart from these different presumptions and principles, much of the law governing unilateral conduct is very similar on both sides of the ocean. But the different presumptions and principles have resulted in diametrically different results on nearly identical facts in key cases, especially when the conduct challenged is a refusal to deal with competitors or customers. 24The differences reveal themselves in assessing the conduct of the big data platforms, as the Article shows below.

III. IMPLICATIONS FOR HIGH TECH, BIG DATA

A handful of high tech giants dominate markets. The firms were started from scratch by entrepreneurs with great ideas, and they attract millions of users every day. They are networks and platforms, have economies of scale, and feature network effects and winner-take-all markets. On the one hand, the network effects please users (who get more "friends" or suppliers or buyers), but on the other hand, they create uncommonly high barriers to entry and reinforce their market power. The firms offer their products "free" on one side of the market (but users give up their data); on the other side, they make huge revenues from advertising, including by selling the data of their users. The high tech firms operate with low-price models, not the high prices that traditionally attract antitrust attention. Some have been exposed for serious misuses or lax protection of data as well as for acquiring personal data from third party sources without permission. Some have waged media campaigns of false information against critics. They offer services in competition with the firms they host on their platforms, and they prefer their own products and demote their rivals, undermine creative start-ups by appropriating their ideas, mine the data of the firms they host to preempt the next big thing, snap up the start-ups that are potential competitive threats, and breach privacy rights of the platform's users. Much of this conduct may violate consumer protection and privacy protection laws. A question is whether the [\*306] firms are also violating the competition laws. Does the answer depend on whether the laws are those of the U.S. or those of the EU (and the many jurisdictions that follow EU law)? It might.

The conduct we shall examine poses challenging questions under Section 2 of the Sherman Act, which prohibits monopolization. The first step of analysis is defining the market, and the exercise of market definition is difficult. 25The second step is proof of monopoly power. Monopoly power is traditionally defined as the power to raise price above a competitive price and reduce output for a significant time. 26In platform markets, this proof may not be possible. The third step is proof of conduct that is anticompetitive. The court may require the plaintiff to establish that the conduct lowers output and raises prices 27by anticompetitive means. This may not be possible. The platforms are accumulating and using new forms of power. The big tech abuses do not fit neatly into the "Chicago School" requirements.

Under EU competition law, the case for abuse of dominance is easier to make. EU law is less demanding of proof of definition of the market. Moreover, a firm might hold a dominant position even when it does not have monopoly power under the neoclassical economists' definition. Status as a "gatekeeper" (power over a dominant platform) might suffice. 28A firm might abuse its dominance when it uses its power in one market to get significant competitive advantages in an adjacent market and does so by conduct that blocks rivals' access and has no competitive merit, 29even if it does not get market power in the second market.

These qualities of EU law make it a more flexible tool than the Sherman Act to deal with the new problems posed by high tech/big [\*307] data. Section 5 of the Federal Trade Commission Act, which prohibits unfair methods of competition, also has this flexibility, at least in theory. 30

IV. THREE EXAMPLES OF ALLEGED PLATFORM ABUSE

A. Google/Comparative Shopping

1. EU Law

In the Google/Comparative Shoppingcase, the European Commission condemned Google, as the dominant search engine, for demoting its rivals and preferring itself on its platform. Here are the salient facts it found:

Google held more than 90% of the general search market in Europe. It launched comparison shopping services. Google was not the first to offer comparative shopping services on its platform; others preceded it. Google entered this market in 2004 with a product called Froogle. But Froogle was not a good product. When Google Search treated Froogle neutrally with its rivals, Froogle performed poorly. This means, under neutral treatment, Froogle did not rank high on the responses to consumer search queries; it was relegated to back pages where it did not get many clicks - and clicks are the way products generate revenues through advertising. In 2008, Google changed its strategy fundamentally to automatically give a prominent place to Google's product (which was renamed and revamped as Google Shopping). Thereafter, Google Shopping appeared at or near the top of search results for comparative shopping services, and it began to appear with rich graphical features. Google Search demoted rivals' services. Even the services of rivals that were most highly ranked by the original neutral algorithm began to appear on average only on page 4. Users seldom access, much less click on, links on page 4. (The top search result on the computer page receives about 35% of the clicks; page 1 results receive about 95%; the first result on page 2 receives about 1%.) As a result of Google Search's software program change, traffic on Google Shopping increased substantially and traffic on the rivals, in spite of their merit, decreased substantially. While the Commission did not question Google's choice to display rich graphic features for the Google service at the top of the page of search results, the [\*308] Commission did question the fact that rivals could not get the same advantage. As a result of its strategy, Google Shopping increased its share in all thirteen markets in the European Economic Area, in many by a large amount.

Summarizing the changes caused by the demotions, the Commission said:

\* "Since the beginning of each abuse, Google's comparison shopping service has increased its traffic 45-fold in the United Kingdom, 35-fold in Germany, 19-fold in France, 29-fold in the Netherlands, 17-fold in Spain and 14-fold in Italy."

\* "Following the demotions applied by Google, traffic to rival comparison shopping services on the other hand dropped significantly. For example, the Commission found specific evidence of sudden drops of traffic to certain rival websites of 85% in the United Kingdom, up to 92% in Germany and 80% in France. These sudden drops could also not be explained by other factors. Some competitors have adapted and managed to recover some traffic but never in full." 31

The Commission concluded that Google abused its dominance by using its leverage in search to give its own comparative shopping service a significant advantage. The Commission found that Google had no objective justification for this conduct. It found that Google's change to prefer its own comparative shopping service was not a product improvement. Google had claimed as an improvement its addition of rich format on top of the results presented for the Google Shopping entry, but the Commission concluded that this addition could not be counted as an improvement because Google gave the embellishment to its product alone.

The Commission required Google to treat its own service equally with rivals' services. As usual, it required the undertaking to submit a plan to achieve compliance with the decision. As well, the Commission fined Google 2.42 million euros.

The case is on appeal to the European General Court. It will be judged in view of the Court of Justice's case law including the recent Inteljudgment, 32which emphasizes competitive effects. Whether a dominant firm's use of leverage to shift significant market share to itself, seriously narrowing market opportunities for competitors, violates EU competition norms will be decided on appeal. 33

[\*309]

2. U.S. Law

How would the Google/Comparative Shopping facts be analyzed under Section 2 of the Sherman Act? The jurisprudence suggests several good arguments for Google. First, market definition and market power would be contested matters. Google asserts that vertical searches are good alternatives to general search, enlarging the market so as to minimize Google's monopoly share of general search. Enlarging the market to include advertising (the paid side of the market) would likewise expand proof problems, even though Google has been labeled as dominant in online advertising with a 37% share. Second, whatever the market, Google's market power will be seriously contested, with Google insisting that it cannot and does not raise prices, reduce output, or lower quality. Third, in a similar comparative shopping case, it would be difficult for a U.S. court to find an anticompetitive abuse under Section 2 of the Sherman Act. Google is not an essential facility under U.S. law. It has no antitrust duty to deal fairly, let alone to deal at all, with firms that want to use its platform, except in rare circumstances. 34Moreover, it may be unlikely that, by reason of its demoting strategy, it acquired market power in the adjacent market (comparative shopping web services). It may be doubtful that it has power to limit output either in general search or in comparative shopping web services. As a result of the conduct, consumers/users are not confronted with a price rise, even though they do suffer a non-quantifiable loss by being given second-best information in answer to their queries, loss of the benefits of the improved performance that stronger head-on competition could bring, and loss of access to innovative products squeezed out by the demotions. (Whether the impugned conduct elevates prices charged to advertisers remains to be explored.) 35The losses, including chilling incentives of the demoted rivals, is speculative and, even if true, Google would urge that the antitrust enforcement itself chills Google's incentives to deliver innovative products. U.S. law is sympathetic to the assumption that it does. 36

The facts of Google/Comparative Shopping find parallels across the GAFA platforms. The abuse problem is probably not one of output limitation. The problem is the distortion of the market so that the firm [\*310] with power, leverage and a conflict of interests succeeds for reasons other than its merits, and the meritorious competition of rivals is suppressed.

What might the AmEx case add to the analysis? AmEx could open the door to full two-sided-market analysis, minimizing the market power and the antitrust harm. 37 AmExmakes it hard to infer market power from exclusionary effects. AmExputs a set of incumbent-preferring arguments into the mouth of Google. 38

We suggest below that the Federal Trade Commission, enforcing Section 5 of the Federal Trade Commission Act (which prohibits unfair methods of competition), could overcome the above obstacles more easily than could a court under Section 2 of the Sherman Act.

B. Facebook-Abuse of Data

1. German Law

On February 7, 2019, the German Federal Cartel Office (FCO) held that Facebook has violated the German abuse of dominance law by gathering personal data from sources beyond Facebook (e.g., every time the user clicks on "like") without the users' knowledge or permission, and using the data to compile a unique database on each user, enabling Facebook to offer advertisers distinctly targeted advertising and thus to enhance its revenues. The FCO characterized the violation as an exploitative one - Facebook exploited users, rather than excluded rivals. The appellate court, however, has suspended the FCO's order pending appeal, after expressing doubts about the legal basis for the decision. 39The following are some of the findings and analysis, as summarized by the FCO. 40

[\*311] Market, Market Power, and Dominance

Facebook is the largest social network in the world. It holds a dominant position in the German market for social networks, having more than a 90% market share. It has 2.3 billion active users worldwide, with 1.5 billion using Facebook daily. Facebook users in Germany number some 323 million monthly and 23 million daily. As to competition in Germany, Facebook faces only some small German providers, and their suitability as an alternative social network is limited in view of Facebook's economies of scale and network effects.

The FCO expressly based the assessment of market power on more than market share. It referenced recent amendments to the German Competition Act to include as indicia of market power: "competitively relevant data, economies of scale based on network effects, the behaviour of users who can use several different services or only one service and the power of innovation-driven competitive pressure ... ." 41Identity-based direct network effects were deemed an important factor in assessing Facebook's market power. Also important were indirect network effects stemming from advertiser-financed services: the larger the user base, the more audience for ads and the more profits to advertisers. Economies of scale that produce cost-savings "provide Facebook with a far greater scope for strategic decisions than its competitors have." 42Facebook invoked multi-homing as a countervailing force, but the FCO found the contention not established. Moreover, the FCO found: "Facebook has superior access to competition-relevant data, in particular the personal data of its users. As social networks are data-driven products, access to such data is an essential factor for competition in the market." 43Lack of access to data "can be an additional barrier to market entry." 44

The Harm to Competition

The FCO found that Facebook imposes exploitative business terms. "The damage for the users lies in loss of control: They are no longer able to control how their personal data are used. They cannot perceive which data from which sources are combined for which purposes ... ." 45Facebook "violates the constitutionally protected right to informational self-determination." 46Further competitive harm is caused to advertising customers, who are faced with a dominant supplier of advertising space in social networks.

[\*312] In finding an exploitative abuse, the FCO drew on contract principles and data protection principles, importing their values into antitrust analysis. Reference to the General Data Protection Regulation, the FCO said, helped to confirm Facebook's lack of justification for exploiting users' data. The FCO recognized Facebook's legitimate interests in processing the data, but found that the legitimate interests did not outweigh the harm to users' interests.

Facebook's Conduct Poses a Competition Problem

The FCO said that access to market data is essential to the market position of social network companies. "Access to data, above all in the case of online platforms and networks," 47is specified as a relevant factor for dominance by the German Competition Act. "Monitoring the data processing activities of dominant companies is therefore an essential task of a competition authority, which cannot be fulfilled by data protection officers." 48

Remedy

The FCO imposed no fine. Its aim was to change behavior. Facebook was required to submit a plan for compliance.

\* \* \*

The German Federal Ministry for Economic Affairs and Energy is further studying digital platforms and abuse of market power to determine whether modernization of the law is necessary. An expert committee issued a report, 49and a follow-up committee is tasked to suggest means to implement the initial report.

European Competition Commissioner Margrethe Vestager, while studying the report, noted "the importance of monitoring data monopolies and internet gatekeepers that can choke off data access to rivals." 50Moreover, the Directorate-General for Competition commissioned its own report. 51Meanwhile, a new Commission has been constituted. Vestager has not only been reappointed the Competition Commissioner, she has been appointed Executive Vice President for the EU's digital policy.

[\*313]

2. U.S. Law

Abuse in the collection and use of data, especially by the big data companies, is a big concern in the world. The abuses and their remedies are being studied in many jurisdictions in addition to Germany and the EU, including Australia, Japan and the UK.

Section 2 of the Sherman Act offers no parallel application to the German case. In the United States, a plaintiff would face difficulties at the outset in defining the market and proving monopoly power. But more basically, the claim of violation by abuse of data collecting, including from third party sites, and collecting and using the data surreptitiously and deceitfully, does not fit with the U.S. antitrust laws. The Sherman Act imposes no special responsibility, not even on a monopoly firm, to have regard for rivals or users. The right to refuse to deal (or to deal on chosen terms) is strong. Moreover, the German Facebook violation is an exploitative violation, not an exclusionary one, and Section 2 does not prohibit exploitative behavior (e.g., excessive prices). 52The German Facebook proceeding did not include exclusionary practices. Such practices, alleged elsewhere, include Facebook's cutting off user access to an improvement by Vine, a video-creating and sharing platform, apparently because Facebook took the Vine product to be a competitive threat to it. 53

Might lessons from AmExplay a role in the analysis? Let us postulate that consumers, including business users, are harmed on one side of the market. Their valuable data is coerced from them, aggregated from third party sources, and monetized lucratively. The social network charges zero (plus the data) to users and sells curated space to advertisers, making possible the zero user-charge. AmExand other decisions would counsel to count positively Facebook's efficiencies in data use and improvement of its services though collection and use of its data trove.

The FCO did consider the advertiser side of the market. It concluded that Facebook exploited advertisers as well as users. It did take note of efficiency benefits through increased accuracy of advertisers in targeting likely buyers, and benefits of the network's declining marginal costs, but it counted those advantages as contributors to Facebook's power, not as contributors to the public's or consumers' welfare. The FCO determined that the users' interests outweighed Facebook's interests. It so concluded not because, if monetized, the [\*314] Euro-amount of the gains to Facebook was less than the Euro-amount of the losses to users, but on quasi-constitutional grounds: people have a right to control their data and to know how it is going to be used; it was wrong for a dominant firm to coerce users to give up their data rights if they were to use Facebook's service at all.

While Section 2 of the Sherman Act has strict limits, Section 5 of the FTC Act is a more flexible vehicle. The FTC is not bound to ignore a problem just because Facebook's conduct may be exploitative rather than exclusionary or just because it interfaces with data privacy. Moreover, the FTC has consumer protection powers and Facebook's behavior raises serious consumer protection concerns. Indeed, the FTC already has a file on Facebook and has just penalized Facebook $ 5 billion for sharing with Cambridge Analytica, a political consultant to then-candidate Trump, data of 87 million Facebook users, which it used to compile voter profiles. 54If a data privacy problem is mixed with a consumer protection problem and possibly an antitrust problem (e.g., an abusive cut-off of access, or an anticompetitive acquisition), the FTC is well placed to consider the abuses together for whatever synergies may be mined. If vested with the multi-faceted matter, the FTC could consider formulating some rules and controlling principles, such as banning self-dealing and disallowing efficiency as a defense to coercion and deception.

C. Start-Ups: Nipping Competition in the Bud

Major platforms such as Facebook, through their massive data troves collected in part from the targets themselves, are well positioned to identify the promising start-ups that pose the greatest competitive threats to the platform, and buy them up or stamp them out. Because the start-ups typically lack significant revenues, the acquisition may be below the turnover thresholds required for premerger filing in some jurisdictions. Moreover, any single such acquisition may just be ignored as too insignificant.

Competition authorities in several jurisdictions are considering the need to be tougher on dominant platforms' systematically buying their most promising and threatening would-be rivals. Germany has revised its merger control thresholds to add a value-of-the-transaction test and to include debt as part of value, so that these rising-star start-ups do not escape assessment. 55The most commonly cited examples [\*315] of allegedly anticompetitive "snap-ups" is Facebook's acquisitions of Instagram and of WhatsApp, both of which platforms provide important alternatives for social network users seeking a model friendlier to younger users.

The future of such start-ups may be highly speculative at the time of acquisition. But what if, as it has been alleged, the dominant platform either buys up or stamps out all potentially threatening start-ups to preserve its dominance? The tale of Snapchat may be a cautionary one. Facebook pursued Snapchat. Snapchat said no. Then Facebook appropriated Snapchat's signature innovation: stories - a photo and video post-platform. The story is told in Facebook is Killing Snapchat with the Format It Created. 56

The big data strategies are reminiscent of tales of the Standard Oil Trust. By some reckoning the conduct may be called efficient. So was Standard Oil's conduct, as insisted by historian John S. McGee. 57But the efficiencies of Standard Oil's strategies did not prevent the giant predatory trust from being Exhibit A to the very enactment of the Sherman Act and did not dissuade the Supreme Court from breaking it up. 58

There are several big challenges to thwarting the so-called "killer acquisitions." One is to be able to identify the anticompetitive qualities of the acquisition at the time of vetting. The second is this: suppose the acquisitions are indeed harmful to competition today. It is possible under existing U.S. antitrust law, although not common, to obtain divestiture of assets whose acquisition turned out to be anticompetitive. The challenge, however, is to prove both that the consolidation is on balance anticompetitive (in spite of efficiency aspects such as better use of data), and that divestiture will noticeably produce competition and make consumers/users better off. Third, the possibility of sale to the dominant platform has been an incentive for start-ups to start up in the first place. One would want to be able to predict that the loss of this route to "success" would not cause more harm than good.

[\*316]

V. PROPOSALS

The "do nothing" and the "break them up" approaches are extreme policy approaches that at the one end would leave real competition problems unaddressed and at the other would apply blunt instruments to cure huge state-of-the-world dilemmas that pose daunting implementation problems and are sure to leave unfilled expectations in their wake.

There are three reasons why the United States might wish to take Europe's big data initiatives more seriously. First, European competition law is the law in a substantial part of the world. If the U.S. wants to be relevant in international transactions, it must appreciate European perspectives. Second, top down regulation is a possible substitute for antitrust. If the antitrust agencies ignore abuses of economic power that people care about, more intrusive regulation is likely to fill the gap. European competition policy gives some insight into how antitrust, complemented with consumer protection and privacy protection, can be an alternative to more intrusive regulation. 59Third, Europe may be right in some not insignificant ways.

We focus on the third point. Europe may be right. We address the skeptics who insist that there is no competition problem and that, if there is, it cannot be solved except by remedies that are worse than the disease. Is there a competition problem? Let us return to the three problems analyzed: (1) the Google/Comparative Shopping problem; (2) the German Facebook problem; and (3) acquisitions by dominant platforms of potentially threatening start-ups. Starting with the last, it is now recognized that the acquisitions of nascant competitors might be anticompetitive. If so, they are fair game for divestiture - if divestiture will indeed produce the desired competition. Going forward, these acquisitions should be vetted more seriously.

There is a philosophical divide between those who want to give more breathing space to even dominant platforms to buy promising start-ups whose futures are speculative, and those who are alarmed that the platforms are snapping up all threatening startups and are thereby insulating themselves from the competitive forces that could make them accountable. 60These are the usual philosophical tugs and play out with little fanfare (or get submerged) in the course of technocratic merger review.

The middle category - the German Facebook case - is largely a problem of deception, privacy invasion, and exploitation of people who [\*317] provide their data. While the German FCO was able to blend the several disciplines, the underlying problem treated in the German Facebook case is not likely to be seen as an antitrust problem in the United States.

We come, then, to category number 1: gatekeepers abuse the users of their platforms who compete with them, systematically downgrading the rivals, sabotaging their inventions, and appropriating their ideas to outcompete them. How to define the market, how to assess market power, how to identify an abuse as anticompetitive, and how to devise a remedy are all contested issues. In part, the divide is ideological. Do we stress that Google (for example) created its platform, conclude that it should be able to use it as it likes, and assume that legal duties will handicap invention? Or do we highlight Google's conflict of interests and observe that downgrading often-better rivals is inefficient as well as unfair? Do we emphasize that clogging the path to market interferes with the competition process, chills the incentives of the platform users, and defeats expectations of consumers, who expect best answers to their queries? In this late day of the political economy debate, the divide will not be closed by evidence or economics. The popular sentiment, however, tends to coincide with the concerns about power, its abuse, and the unaccountability of the dominant platforms. 61

Here are six suggestions for U.S. law, based on this author's perception that the big data antitrust abuses are real and pressing:

1. Recognize that the dominant big data platforms have economic power sufficient to cause competitive harms. When conduct of a dominant platform has demonstrable anticompetitive qualities, we should simplify the proofs of power and effects and get quickly to the question of procompetitive justifications. 62Anticompetitive qualities include clauses and conduct to frustrate multi-homing, interoperability, and data portability. If the platform engages in conduct to raise rivals' costs, to make alternatives infeasible, or to marginalize rivals, the burden should shift; and if defendants offer no credible procompetitive [\*318] explanation or justification, the conduct should be prohibited. The Federal Trade Commission is well situated to do this job. 63

2. Much conduct is likely to require deeper study of pros and cons. The FTC should examine the practices, listen to the justifications, and judge the conduct. It should not be required to prove that the platform's conduct will lessen output in the relevant market as a condition precedent to finding an offense. Output limitation is not the problem. To clarify the law, the FTC might write rules under its rule-making authority.

3. In the case of a dominant platform that also hosts its own services on the platform, the gatekeeper has a conflict of interest. The FTC should seriously consider establishing a duty of dominant platforms to treat all firms that are rivals on the platform (including its own) neutrally. As a first step the FTC should require the platform either to announce clearly regarding search query returns: "You are advised that we give preference to our own product" 64or to offer neutral, merit-based treatment. This can be done immediately. Writers and implementers of the algorithm should be rewarded on the basis of the system's performance, not on the basis of the platform's own products' performance.

#### AND there is a growing divergence and lack of coordination with Japan and South Korea.

Markus Dominik Müller 20, University of Vienna, East Asian Economy and Society, "Antitrust Regulation in Japan and South Korea – What Influence Does Chicago School of Antitrust Exercise on Competition Policy and Digital Economy," SSRN, 03/04/2020, pg. 24-26.

Globally, a sharp increase in digital economy competition has led to the creation of online marketplaces of different sizes over the last two decades (Katz 2019b). For scholars, the term ‘digital economy’ corresponds closely to e-commerce (Meyerling 2017, 454). Although some argue that it has become increasingly difficult to distinguish between a ‘non-digital’ and a ‘digital’ economy as “digital economy is increasingly becoming the economy itself, it would be difficult, if not impossible, to ring-fence the digital economy from the rest of the economy” (OECD 2015, 54). A large number of institutions and academics are dealing with the question of competition regulations for multisided platforms in the digital economy (Katz 2019a, 2019b; Van Gorp & Batura 2015; Hayashi & Arai 2019). In general, microeconomic theory is at the origin of any competition policy as competitive markets allocate resources efficiently in the absence of market failure. One calls this proposition the ‘basic theorem of welfare economics’ (Hatta 2017, 2). Both, South Korea and Japan, favor an open market, which has major, highly competitive players though. Their largest domestic internet shopping companies are Rakuten, Amazon and Coupang, with market shares between 29% (Rakuten) and 20% (Amazon) in Japan (Endo 2017). South Korean e-commerce company Coupang dominates the daily active users’ rate in the country reaching almost four million users per day (Song 2019). Figure 5 presents the top 5 online shopping places in South Korea.

[Chart omitted]

For the violation of respective competition laws, full investigations have been conducted against different companies of the digital economy, foremost large market players such as Google, Amazon, Rakuten, and Coupang (Takeuchi & Sugihara 2019; Inagaki & Lewis 2018; Lee 2019; CPI 2019b). These companies play major roles in infringement cases (Autor et al. 2017, 2).

The advancements of technology and the subsequent challenges for competition law are part of Japan’s and South Korea’s concerns. Many researcher, so also Song (2016) stressed on the importance of consumer protection within South Korea’s Consumer Protection Policy. Visible in recent debates, issues or challenges surrounding antitrust law are currently attracting significant attention in both countries. The Japan Fair Trade Commission (JFTC), for instance, has established a study group to clarify the issue about ‘collective data collection’ as well as ‘digital cartels’ and concludes that there is a high necessity for “vigilance against monopolization or oligopolization of digital platforms” (JFTC 2018a). At the end of February 2019, the antitrust agency carried out sector wide inspections of large digital, globally operating platforms. In doing so, the JFTC sought to demonstrate its “strong interest in the e-commerce sector” concerning anti-competitive corporate behavior (Takamiya 2019). In South Korea, investigations are currently ongoing into unfair competition among tech companies. According to Joh Sun-wook, the new head of the fair trade commission, the priority under her direction is “reducing data monopolies and enforcing better protections for customer information” (CPI 2019c). The focus is on leading companies in the ICT sector, including Google, Naver, Facebook and Apple, among others (CPI 2019a, 2019c). These are crucial steps as Japan as well as South Korea have several firms infringing on competition law, these cases are subject to the national antitrust regulators (Baek 2018; CPI 2019b).

#### That crushes US relations with both countries.

Michael K. Young 01, Dean and Lobingier Professor of Comparative Law and Jurisprudence, The George Washington University Law School, "Lessons from the Battle Front: U.S.-Japan Trade Wars and Their Impact on the Multilateral Trading System," pg. 764-774, 2001, HeinOnline.

The United States' decisions in 1993 and 1995 to decline participation in the services framework agreement and thereafter to withdraw from the WTO maritime and telecommunications talks were certainly described in part in terms of the inadequacy of the market opening offers of other countries. At the same time, the United States also made quite clear that at least a major part of the problem was that other countries were unwilling to make their financial, services, telecommunications, and shipping markets sufficiently resemble those of the United States. 26 Reshaping, not merely opening, markets was clearly the agenda. 27 Failure to achieve that agenda resulted in the U.S. decision to pass on the agreement, at least for the time being.

This is not to say that the Clinton administration was the first to advance such a trade policy. At a minimum, this phenomenon can be traced at least as far back as the mid 1980s when the spiraling U.S. trade deficit resulted in strong pressure for protectionism in the United States. In response to that pressure, the Reagan Administration called upon representatives of companies in many of the major export oriented industries to voice their support for free trade. 28 These interest groups did champion free trade, but because of their export orientation, these groups also argued that free trade in the United States could only be sustained in conjunction with similar market opening concessions abroad. The link between open markets in the United States and open markets elsewhere in the world thus became an increasingly significant component of U.S. trade ideology. This ideology may have its roots much further back, indeed perhaps as far back as Charles Wilson, who articulated the most basic version of this ideology, namely, "What was good for our country was good for General Motors, and vice versa."29

At the same time it is important to note that when Wilson first chanted his mantra, the United States was more confident of its preeminent place in the international economic pecking order, and more secure in its belief that it could sustain an open world trading system almost entirely on its own, at least for a while. That sense of preeminence has historically been the most likely factor in keeping in check the natural inclination of U.S. trade negotiators to seek identical market opening concessions as a prerequisite to keeping U.S. markets open. Starting at the end of World War II, in other words, the United States had the will and the economic power to sustain the world trading system by unilaterally opening up its markets as both an example and an invitation to the rest of the world. Over time a number of countries followed suit, and they, as well as the United States, prospered greatly.

More recently in the United States, however, a general perception has developed that by itself, it can no longer sustain the world trading system and that other countries must open up their markets in a non-reciprocal way, or at least as much as the United States. This is needed, the belief dictates, in order to set an example and to extend an invitation to freer trade, just as the United States did after World War II. The perception is equally strong that those countries most capable of taking such action-in particular Japan, the single most capable country-have unfortunately not shown any international leadership. 30 These countries, rather, wrongly consider trade negotiations to be an oriental bazaar (and, in the bargain, probably also misunderstand the dynamics of the bazaar relationships). Their main object is to exact as many concessions as possible from the other side, while giving as little as possible in return. This short-sighted strategy has gradually eaten away at the U.S. inclination to keep its markets open without reservation or reserve.

Obviously, this overstates the case somewhat. The United States has never been that unselfish, nor should anyone expect any country to behave entirely unselfishly. The United States' creation of the current world trading system was, at least in part, designed to encourage economic development and in the bargain, create markets for U.S. goods, not to mention reductions in requirements for U.S. aid. The United States must have also hoped that political stability and democracy would follow in the wake of market openness. Throughout all the trade negotiations that followed the creation of the GATT, in addition, the United States bargained-and bargained hard-for concessions that would particularly benefit U.S. interests.

From the very beginning it is still unarguable that the United States had the most open markets of any major country, as it almost certainly does today.31 Despite the openness of those markets, the United States willingly committed itself to most favored nation principles and made access available to any and all countries that met even the most minimal requirements of openness. In order to exact market-opening concessions from other countries, the United States also, by and large, did not close its markets, though it occasionally threatened to do so, at least on a bilateral basis. Even somewhat overstating U.S. beneficence, it does not overstate the failure of leadership on the part of virtually every other country in the world.3 2 It is precisely that failure of leadership, combined with a strong domestic perception that the United States no longer enjoys comparative economic advantage over the rest of the world, which has lead to a fundamental rearticulation of U.S. trade policy, a rearticulation that found its clearest, but by no means first, articulation in the Clinton administration.

C. Consequences of a Shift in Trade Ideology?

A trade policy rooted in notions of reciprocity, narrowly defined, has significant theoretical economic and political problems, to be sure. Such problems are not reviewed here, as they are well covered elsewhere, and in any event are well known to trade negotiators in the United States and elsewhere.

What may be less considered and understood, however, are two other very important ways in which this shift in ideology may affect the world trading system. First, this shift may have the consequence of moving us toward attempts at harmonization of economic regimes, even in cases where such harmonization is neither economically rational nor politically justifiable or sustainable. 33

Second, this shift in ideology may, have very practical, real-world consequences in the way the United States formulates its trade policy and conducts its trade negotiations. Given the large role the United States plays in international trade negotiations, such a shift can reverberate deeply throughout the world and probably ought to be carefully considered. While a precise determination of each consequence is difficult from this temporal vantage point, such an examination is the purpose herein.

One should focus particularly on seven possible consequences of this shift in ideology and rhetoric, including: (1) an expansion of the range and types of regulatory action (and inaction) that might legitimately be considered "barriers" to trade; (2) an increased tendency for U.S. trade negotiators to examine private sector activity that might impede trade; (3) substantially increased pressure by U.S. negotiators to use numerical yardsticks in trade agreements; (4) a shift in attention to countries with which the United States has a large trade deficit, and away from countries with which the United States has legitimate rule-based grievances under trade treaties; (5) increased use of those domestic U.S. laws designed to give the U.S. president added powers to force open foreign markets; (6) an increased propensity to abandon certain other fundamental principles that have guided at least U.S. trade negotiations during the postwar period; and (7) a greater emphasis on opening markets through bilateral and regional trading agreements and arrangements, rather than through multilateral negotiations under the auspices of the WTO.

Let us briefly examine the overall structural changes that this change in ideology may occasion and then turn to the possible practical, short-term consequence that might logically and practically derive from a shift in trade ideology.

III. STRUCTURAL CONSEQUENCES OF A SHIFT IN TRADE IDEOLOGY

The existence of rather explicit barriers to trade like quotas and tariffs have hidden the relevance and importance of "reciprocity" or "comparability" from view for many years. As long as goods and services were denied entry by explicit barriers, negotiations focused on such explicit barriers. The initial Bretton Woods agreement dealing with trade, not surprisingly, was called the General Agreement on Tariffs and Trade, and even less surprisingly the first number of negotiations dealt principally with quotas and tariffs.3 4

As the importance of tariffs and quotas as barriers to trade diminished, however, the world trading regime turned its attention to other issues, including, most importantly for our purposes, nontariff and non-quota barriers to trade, such as licensing requirements, safety and health standards, and myriad other domestic measures that had the effect of discouraging the importation of foreign goods and services, or disproportionately disadvantaging such goods and services once they entered the country.35 Such measures are much harder to identify and even harder to remove than simple tariffs and quotas. The negotiations accordingly became much more complex and technical. The avowed goal, however, remained the same, to make it easier for foreign goods and services to compete on an equal footing with domestically imported goods.

Over time, of course, a number of things happened that made at least legislators, if not necessarily trade negotiators, despair of ever achieving "free" and "fair" access to foreign markets. It indeed became increasingly less clear exactly what "free" and "fair" meant. Despite all the reductions in trade barriers supposedly achieved through the GATT, bilateral U.S. trade deficits, and even the overall trade deficit, began to rise substantially.

Powerful voices in the political process became restless. Perhaps U.S. trade negotiators could not accurately identify the real barriers to its trade. Perhaps U.S. trade negotiators were too inclined to sacrifice U.S. economic interests to other geopolitical interests. The U.S. Congress accordingly took major steps to realign the basic domestic trade negotiating institutions, and the way in which those institutions operated.3 6 First, responsibility for conducting trade negotiations was shifted from the Department of State to the White House. Second, private interests were increasingly empowered to force the Executive Branch to act on their complaints. Finally, the president's discretion to refrain from acting on those complaints was gradually whittled away both by legislation that explicitly reduced executive discretion in certain trade matters and by the threat of more such legislation or worse.3 7

Still, the deficits - or at least the perception of the deficits - continued to rise, the comparative position of the U.S. among the world's economies continued to decline (or at least it was perceived to decline), and people began to wonder whether the United States was attacking the right problem. Perhaps the problems were more structural and institutional. Various negotiations were designed at least in part to address these broader structural issues. Such negotiations included the obvious, such as the Structural Impediments Initiative (SII) talks with Japan. 38

As a formal matter, these talks were designed to effect fundamental structural changes that would ease the task of importing into Japan and the United States. 39 As a practical matter, these talks were created to give U.S. trade negotiators a forum to urge institutional changes that would make Japan look more like the United States.40 The list of U.S. demands left little doubt about that approach. 41 The United States urged alterations in the pattern of enforcement of basic laws, such as those governing competition policy and corporate governance, to allow appreciably more private enforcement. 42 They suggested the creation of mechanisms, principally judicial mechanisms that would allow private individuals to question more directly the legality and propriety of administrative action. 43 They suggested changes in the operation of the stock market, at least some of which would have facilitated mergers and acquisitions. 44

The list is long, and each demand can be explained in terms of its possible salutary impact on trade. A careful examination of each of the demands, nevertheless, leaves little doubt that when addressing a perceived problem, U.S. trade negotiators invariably thought the best solution forJapan was to make its economic system look more like that of the United States.

To some extent that conformity is what the originators of the competition policy debate also had in mind. It is not a coincidence that this debate began in earnest after Lord Leon Brittan's famous speech in Davos. 45 In that speech he noted the still-obvious difficulties of importing into some markets, despite the elimination of myriad formal trade barriers, including many nontariff barriers. He then asked whether all the participants in the world trading system could-or perhaps should-continue to provide benefits to those difficult countries, if those difficult countries, for some reason or another, did not seem to provide equivalent benefits to the rest of the world. The logical conclusion that flows from this line of inquiry (though not necessarily the conclusion that Lord Brittan seemed to draw) is that some economies might be somehow structurally or institutionally incompatible with the economies of the rest of the world, and countries with incompatible economies should not enjoy the benefits of access to the markets of the rest of the world, if they could not readjust their markets to allow the rest of the world to take advantage of their markets.

One obvious framework for considering the structure of economies, of course, was through the prism of competition policy. Talks commenced about how to create legal frameworks that would ensure that competition reigned supreme in every country. These negotiations in the Organization for Economic Cooperation and Development (OECD) and elsewhere were highly technical in nature, and competition law specialists increasingly tend to opine that while laws may vary, many, if not most developed countries have anti-competition policy regimes that allow competition to flourish, at least in most industries. 46 It is, therefore, perhaps hard to recall that in their infancy, the rhetoric surrounding these talks made it seem that the trade negotiations were actually about restructuring every economy in the world so that they would all resemble the free-booting, winner-take-all, aggressively competitive economic system of the United States. 47 As the more technical experts came to the fore, the nature of these discussions changed dramatically, of course, but in the beginning, at least, the rhetoric surrounding these talks -like the SII talks- made it seem that the principal agenda was to make the rest of the world look as much like the United States as possible.

As the SII talks faded in utility and importance and as the competition policy talks turned technical, fora for urging the rest of the world to reshape itself in the image of the United States shifted partly to the WTO. The fundamental appeal of this approach, nevertheless, did not necessarily vanish, but seems to have resurfaced at least in part in the bilateral quest for reciprocity or comparability.

Now, those terms "reciprocity" and "comparability" do not have to mean that the United States seeks to make the economy of its counterparts resemble its own. It could mean merely that the United States seeks what has traditionally been sought in trade negotiations: an import regime that does not discourage imports, and does not disadvantage imports after they enter a country and attempt to compete with domestically-produced goods.

In light of the recent history of trade ideology in the United States, however, that is not what the terms "comparability" and "reciprocity" mean. It appears, rather, that U.S. trade negotiators are demanding that our trade partners make their markets open both to a degree and in a manner comparable to that of the United States. Despite all the reductions in trade barriers, after all, economic structures and institutions that still seem to disadvantage U.S. goods continue to exist in many countries. This has generated something like trade battle fatigue among U.S. trade policymakers, along with many members of Congress. In the bargain, many are convinced that a market can be as open to foreign goods and services as the United States if, and only if that market in fact resembles the U.S. market in both structure and function.

This is not to say it is necessarily sensible or desirable, from either an economic or political point of view, to try to make the rest of the world look like the United States. Many internal barriers to trade and free competition can be reduced or eliminated by means other than making each country's economic system identical to all the others, indeed even stronger.48 The relatively soft approach of "harmonization" is not always the most economically efficient or socially desirable way to expand free trade. 49 Mechanisms other than "harmonization" can often be used to better effect in addressing internal barriers to trade and competition. For purposes of economic efficiency, and certainly for political and social policy purposes, the key clearly is not necessarily to make all the world's economic systems resemble each other. The key, rather, is to make them operate in such a manner that goods can flow freely in and out and that all goods, once in, can compete equally. That does not require identical or even necessarily harmonized systems.

Discovering precisely what changes are necessary within each system, and then effecting such changes is laborious, difficult, time consuming, and, to date at least, largely unsuccessful. U.S. politicians and their executive charges do not always operate in a political climate that allows them the leisure to unravel each of these problems, and then urge U.S. trade partners to adopt optimal solutions compatible with U.S. trade partners' current economic structure and desired social policies. It is often much easier to simply urge trade partners to make themselves over in the trade image of the United States in order to become as trade friendly as the United States. Convincing U.S. trade partners of the wisdom of this course is not especially easy either, but the solution to that is simply to threaten that access to the U.S. markets will be restricted in the event that-and to the extent that-it perceives its markets to be restricted. While, as a matter of strict logic, the desire to make the rest of the world as open to trade as the United States does not necessarily lead the United States to urge its trading partners to become more like it, the political milieu within which trade policy formation occurs in the United States thus increasingly pushes in that direction. The Clinton Administration was certainly not the first to feel this pressure, nor the first to urge, either explicitly or implicitly, U.S. trading partners to become more like the United States. It simply was the most explicit in making this the foundational premise for developing and executing its trade policy.

U.S. attitudes about trade agreements in areas of emerging importance, such as telecommunications and financial services, also leave little doubt that the United States is reluctant to promise to keep its markets open until the rest of the world opens their markets adequately. An examination of U.S. objections to proposals put on the table in recent negotiations over those two subjects leaves little doubt that the core concern about most of those proposals was lack of sufficient promises that the offering countries would restructure their markets to look like the United States. 50 The United States seems to simply have trouble understanding how a telecommunications market can be considered truly open and freely competitive if it does not resemble the U.S. market to some considerable degree. The same is true with respect to financial services, though in this sector, resemblance takes on a regulatory dimension, i.e., that the foreign country provides U.S.-style prudential regulations.

With reductions in explicit barriers to trade, such as quotas and tariffs, perhaps it was inevitable such a point would be reached; nevertheless, it does portend a fundamental shift in rhetoric in trade negotiations. For the first time in postwar history, it may put the major trading countries on an ideological collision course. This, in turn, may either severely undermine the basic developed country consensus regarding free trade or dramatically change the nature of trade negotiations and the underlying institutional framework that supports those negotiations. In either case, this shift in conceptual framework cannot long be ignored if the hope is to continue expansion of world trade through multilateral agreements and multilateral institutions.

#### Absent that, a North Korea war is inevitable.

EAF 21, "Biden’s high stakes on repairing Japan–South Korea relations," East Asia Forum, 07/12/2021, https://www.eastasiaforum.org/2021/07/12/bidens-high-stakes-on-repairing-japan-south-korea-relations/.

US President Joe Biden has put priority on mending US alliance relationships in the Asia Pacific region, bringing US allies together in a united approach on China and restarting US negotiation to denuclearise North Korea. Deepening US–Japan–ROK trilateral cooperation is a key mechanism, critical to his agenda. But the current tensions and deep-seated complexities of the Japan–South Korea relationship continue to be serious stumbling blocks.

The stakes are high for Japan and South Korea to repair their economic, diplomatic and security cooperation. They are both economically advanced democracies whose prosperity is rooted in a free and open global trading system and with important roles to play as leaders in the region.

Japan and South Korea are both important US allies in East Asia and efforts on alliance deepening, bolstering deterrence capabilities, reducing the US security burden and persuading the United States to stay engaged in the region would be better channelled trilaterally.

Japanese and South Korean efforts to engage and shape China as a responsible and constructive regional stakeholder, such as through the China–Japan–ROK trilateral, would be more effective if Japan and South Korea were working together with common purpose.

US–Japan–ROK trilateral contingency planning vis-a-vis North Korea is imperative given the need for US troops based in Japan and the Japanese Self Defense Forces logistical support in case a major crisis were to erupt on the Korean Peninsula.

#### Extinction.

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But the United States has consistently refused to adopt a “no first use” policy — a policy not to be the first one in a conflict to use a nuclear weapon, and to use them only if the other side uses them first. That means Trump could theoretically decide to launch a nuclear strike before an adversary’s nukes go off in America. In the heat of battle, the US military might detect an incoming nuclear attack from North Korea and the president could decide to respond with a similar strike. Either way, the president is the one who ultimately decides to put the process of launching a nuclear strike in motion — but he still has a few steps to complete. 2) A US military officer opens the “football” Once the president has decided the situation requires a nuclear strike, the military officer who is always by the president’s side opens the “football.” The leather-clad case contains an outline of the nuclear options available to the president — including possible targets, like military installations or cities, that the US’s roughly 800 nuclear weapons ready to launch within minutes can hit — and instructions for contacting US military commanders and giving them orders to launch the missiles with warheads on them. 3) Trump talks with military and civilian advisers The president is the sole decision-maker, but he would consult with civilian and military advisers before he issues the order to launch a nuclear weapon. A key person Trump must talk to is the Pentagon’s deputy director of operations in charge of the National Military Command Center, or “war room,” the heart of the Defense Department that directs nuclear command and control. The president can include whomever else he wants in the conversation. He would almost certainly consult Gen. John Hyten, commander of US Strategic Command, since Hyten is responsible for knowing what the US can hit with its nuclear weapons. But Trump would likely also include Defense Secretary James Mattis, National Security Adviser John Bolton, and Gen. Joseph Dunford, chairman of the Joint Chiefs of Staff, in that conversation as well. The chat also doesn’t have to be held in the White House’s Situation Room; it can happen anywhere over a secured phone line. If any of the advisers felt such an attack would be illegal — like if Trump simply wanted to nuke Pyongyang despite no apparent threat — they could advise the president against going ahead with the strike. Last November, Hyten publicly said he wouldn’t accept an illegal order from Trump to launch a nuclear attack. “He’ll tell me what to do, and if it’s illegal, guess what’s going to happen?” Hyten told an audience at the Halifax International Security Forum last year. “I’m gonna say, ‘Mr. President, that’s illegal.’” He continued by outlining what the military could consider an illegal order: if a nuclear attack isn’t proportional to the actual threat, for instance, or if the attack would cause unnecessary suffering. However, what does and doesn’t constitute a “legal” order is still up for debate and was the focus of a congressional hearing last November. Either way, if Hyten refused to follow the order, Trump could fire him and replace him with someone who would carry it out. 4) The president gives the official order to strike After the conversation, a senior officer in the “war room” has to formally verify that the command is coming from the president. The officers recite a code — “Bravo Charlie,” for example — and the president must then respond with a code printed on the “biscuit,” the card with the codes on it. Then members of the “war room” communicate with the people who will initiate and launch the attack. Depending on the plan chosen by the president, the command will go to US crews operating the submarines carrying nuclear missiles, warplanes that can drop nuclear bombs, or troops overseeing intercontinental ballistic missiles on land. 5) Launch crews prepare to attack The launch crews receive the plan and prepare for attack. This involves unlocking various safes, entering a series of codes, and turning keys to launch the missiles. Crews must “execute the order, not question it,” Cirincione told Maizland. 6) Missiles fly toward the enemy It could take as little as five minutes for intercontinental ballistic missiles to launch from the time the president officially orders a strike. Missiles launched from submarines take about 15 minutes. And then the president waits to see if they hit their target. The three main risks of nuclear war — and one wild card Those that have nuclear weapons, many have argued, will never use them. The destruction and human devastation is so unimaginable that it’s hard to believe a world leader will launch them again, they say. But no one can guarantee they won’t be used at least once more — and that possibility keeps most nuclear experts up at night. They disagree wildly as to what the next nuclear use might look like or how it might happen, but they almost unanimously cite the same three risks. 1) US vs. North Korea war The potential nuclear conflict between the United States and North Korea worries most experts — and likely most people on Earth. That makes sense: Trump and Kim, the North Korean premier, spent most of 2017 threatening to bomb each other with nuclear weapons. Kim actually gained a missile capable enough of reaching the entirety of the United States, although questions remain about whether it could make it all the way with a warhead on top and detonate. Still, there remains a genuine fear — perhaps slightly allayed now following Washington and Pyongyang’s diplomatic thaw — that the leaders might escalate their public squabble into a nuclear conflict. In February, Yochi Dreazen wrote for Vox that “a full-blown war with North Korea wouldn’t be as bad as you think. It would be much, much worse,” in part because “millions — plural — would die.” As Dreazen recounts, the US would likely have to send in around 200,000 troops to destroy Kim’s nuclear arsenal. Seoul, South Korea’s capital, would soon — if not already — lie in ruins due to North Korea’s large artillery capabilities. None of that may even be the worst part: Bruce Klingner, a 20-year veteran of the CIA who spent years studying North Korea, told me that Iraqi leader Saddam Hussein had stood by in 2002 as the US methodically built up the forces it used to invade the country — and oust Hussein — the following year. He said there was little chance that Kim would follow in Hussein’s footsteps and patiently allow the Pentagon to deploy the troops and equipment it would need for a full-on war with North Korea. “The conventional wisdom used to be that North Korea would use only nuclear weapons as part of a last gasp, twilight of the gods, pull the temple down upon themselves kind of move,” said Klingner, who now works for the conservative Heritage Foundation. “But we have to prepare for the real possibility that Kim would use nuclear weapons in the early stages of a conflict, not the latter ones.” In effect, any attempt to overthrow the Kim regime would prompt North Korea to launch nukes at the United States. Washington would almost certainly respond in kind, leading to one of the worst wars in world history. 2) US vs. Russia war Few experts discounted the idea that the US and Russia could yet engage in a nuclear war despite a decades-long standoff. After all, they’ve come close a few times. Here are just two examples: In September 1983, a missile attack system made it seem like the US had launched weapons at the Soviet Union. One man, Soviet Lt. Col. Stanislav Petrov, decided it was a false alarm and didn’t report the alert. Had he done so, Moscow likely would’ve responded with an actual nuclear strike. Stanislav Petrov, a former Soviet military officer known in the West as “The man who saved the world’’ for his role in averting a nuclear war over a false missile alarm, died in May, 2015 at age 77. Stanislav Petrov, a former Soviet military officer known in the West as “The man who saved the world’’ for his role in averting a nuclear war over a false missile alarm, died in May 2015 at age 77. Pavel Golovkin/AP Two months later, a too-real NATO war game — Able Archer 83 — made the Soviets believe Western forces were preparing for an actual attack. Moscow put its nuclear arsenal on high alert, but ultimately, neither side came to nuclear blows. Today, two main reasons explain why a US-Russia nuclear fight is a major concern. The first is the most obvious: Moscow just has so many nuclear weapons. Russia is the only country that could match the US bomb-for-bomb in any conflict. The longer Moscow has its weapons, the thinking goes, the higher the chance it uses them on the US — or vice versa. The second reason is the most troublesome: Washington and Moscow may be on a collision course. Russia is expanding further into Europe and encroaching on NATO territory. There’s even fear that Putin might authorize an invasion of a Baltic country that once was a part of the Soviet Union but is now in NATO. If that happens, the US would be treaty-bound to defend the Baltic country, almost assuredly setting up a shooting war with Moscow. Experts disagree on what would happen next. Some, including the Trump administration, claim Russia would use nuclear weapons early in a fight as a way to “escalate to deescalate” — do something so brash at the start of a conflict that it has to end before it gets even worse. Others say Russia would use the weapons only if its forces are on the brink of defeat. Magnets depicting Russian President Putin and President Trump on sale in Helsnki, Finland. Magnets depicting Russian President Putin and President Trump on sale in Helsnki, Finland. Alexander Demianchuk\TASS via Getty Images But Olga Oliker and Andrey Baklitskiy, experts on Russia’s nuclear strategy, wrote at War on the Rocks in February that Moscow’s “military doctrine clearly states that nuclear weapons will be used only in response to an adversary using nuclear or other weapons of mass destruction,” or if the country’s survival is in doubt. In other words, they say Russia would only use nukes in retaliation or to avoid certain extinction. Washington, of course, would likely respond with its own nuclear strikes after Moscow dropped its bombs. At that point, they’d be in a full-blown nuclear war with the potential to destroy each other and much of the world (more on that below). 3) India vs. Pakistan war India and Pakistan have gone to war four times since 1947, when Britain partitioned what had been a single colony into Hindu-majority India and Muslim-majority Pakistan. The worry today, though, is that a fifth conflict could go nuclear. Protesters hurl stones towards police and paramilitary men during clashes on the outskirts of Srinagar, India, on October 16, 2018. Protesters hurl stones towards police and paramilitary men during clashes on the outskirts of Srinagar, India, on October 16, 2018. Waseem Andrabi/Hindustan Times via Getty Images After decades of testing, India officially became a nuclear power in 1998. Islamabad, which had started a uranium enrichment program in the 1970s, soon joined New Delhi in the nuclear club. Two of their fights — the 1999 Kargil War and the 2001-’02 Twin Peaks Crisis — happened with fully functioning nuclear arsenals, but ultimately, neither country chose to use them. But the opportunity keeps presenting itself. Each side claims the other has violated an ongoing ceasefire in the contested, but India-administered, Kashmir region. The region continues to be roiled by violence; for instance, six people were killed in separate instances on September 27. The dispute over Kashmir is a key reason for current India-Pakistan tensions — and has the potential to spiral out of control. Javier Zarracina/Vox Some fear that India and Pakistan may reach for the proverbial nuclear button sooner rather than later. Here’s just one reason why, according to an April report by Tom Hundley for Vox: The Pakistan navy is likely to soon place nuclear-tipped cruise missiles on up to three of its five French-built diesel-electric submarines. ... Even more disturbing, Pakistani military authorities say they are considering the possibility of putting nuclear-tipped cruise missiles on surface vessels. ... Pakistan says its decision to add nuclear weapons to its navy is a direct response to India’s August 2016 deployment of its first nuclear submarine, the Arihant. A second, even more advanced Indian nuclear submarine, the Arighat, began sea trials last November, and four more boats are scheduled to join the fleet by 2025. That will give India a complete “nuclear triad,” which means the country will have the ability to deliver a nuclear strike by land-based missiles, by warplanes, and by submarines. In effect, India and Pakistan are in a nuclear arms race, and historical enemies will soon patrol dangerous waters in close proximity with nuclear weapons aboard their vessels. While there’s no real indication a fifth India-Pakistan war is on the horizon, it’s possible one flare-up puts both countries on the path to a nuclear crisis. Wild card: Trump’s temperament Cirincione, the head of the Ploughshares Fund, told me the risk of nuclear war is increasing because of one factor: Trump. “He is the greatest nuclear risk in the world, more than any person, any group, or any nation,” he said. “The policies he is pursuing are making most of our nuclear risks worse, and he is tearing down the global institutions that have reduced and restrained nuclear risks over the last few decades.” Activists marches with a model of a nuclear rocket during a demonstration against nuclear weapons on in Berlin, Germany, on November 18, 2017. About 700 demonstrators protested against the escalation of threat of nuclear attack between the US and North Ko Activists marches with a model of a nuclear rocket during a demonstration against nuclear weapons on in Berlin, Germany, on November 18, 2017. About 700 demonstrators protested against the escalation of threat of nuclear attack between the US and North Korea. Adam Berry/Getty Images Here’s what he means: The administration’s Nuclear Posture Review, released in February, lowered the threshold for dropping a bomb on an enemy. Basically, the US said that it would launch low-yield nuclear weapons — smaller, less deadly bombs — in response to nonnuclear strikes, such as a major cyberattack. That was in contrast with previous US administrations, which said they would respond with a nuke only in the event of the most egregious threats against the US, like the possible use of a biological weapon. The document also calls for more, smaller weapons on submarines and other platforms to attack enemies. Many experts worry that having tinier nukes makes them more usable, thereby increasing the chance of a skirmish turning into a full-blown nuclear war. (Think, for example, of the US-China trade war escalating to the point that Trump thinks his only option is to launch a smaller nuke, or how Trump could respond to Beijing after a devastating cyberattack on US infrastructure.) Plus, increasing the arsenal in this way would partially undo decades of the US’s work to stop nuclear proliferation around the world. Some experts, like Georgetown’s Kroenig, say having smaller tactical weapons is actually a good idea. Our current arsenal, which prioritizes older and bigger nukes, leads adversaries to think we would never use it. Having smaller bombs that America might use, then, makes the chance of a nuclear conflict less likely. “It gives us more options to threaten that limited response,” Kroenig told me. “We raise the bar with these lower-yield weapons.” But the Trump risk may have less to do with what kinds of bombs he has and more to do with his temperament. Take his tweet from January 2 toward the end of his spat with Kim Jong Un, the North Korean leader: Donald J. Trump ✔ @realDonaldTrump North Korean Leader Kim Jong Un just stated that the “Nuclear Button is on his desk at all times.” Will someone from his depleted and food starved regime please inform him that I too have a Nuclear Button, but it is a much bigger & more powerful one than his, and my Button works! 475K 7:49 PM - Jan 2, 2018 Twitter Ads info and privacy 324K people are talking about this While tensions with North Korea were high early on in Trump’s presidency, he has yet to face a situation, like his predecessors did, where it seemed nuclear war was likely. The 13-day Cuban missile crisis in October 1962, where the Soviet Union had secretly placed missiles in Cuba — just 90 miles from the US mainland — comes to mind. Members of President John F. Kennedy’s team, especially his military advisers, called for airstrikes on Cuba and even an invasion. But Kennedy decided to set up a blockade of the island and try to work out a diplomatic settlement with the Soviets, in part because a military confrontation might turn nuclear. Ultimately, the situation ended when they agreed on a deal: The Soviets would withdraw the missiles from the island, and the US would take out its missiles in Turkey. Before that conclusion, both sides came as close to nuclear war as ever. Customers gather to watch President John F. Kennedy as he delivers a televised address to the nation on the subject of the Cuban Missile Crisis, on October 22, 1962. Customers gather to watch President John F. Kennedy as he delivers a televised address to the nation on the subject of the Cuban Missile Crisis, on October 22, 1962. Ralph Crane/The LIFE Picture Collection/Getty Images How would Trump handle himself in a similar situation? Would he resist the urges of some in his military brass to strike an enemy — perhaps with a lower-yield nuke — or would he simply tweet out a threat in a hair-trigger moment? The fact is we don’t know — but what we do know about Trump makes his demeanor in such a situation a potential, even if very small, nuclear risk. Here’s what happens in a nuclear attack The theory around whether someone might drop a nuclear bomb takes away from the most serious matter in these discussions: the human and physical toll. Simply put, a nuclear strike of any magnitude would unleash suffering on a scale not seen since World War II. And with the advances in nuclear technology since then, it’s possible the devastation of the next nuclear strike would be far, far worse. It’s hard to picture what the effect of a modern-day nuclear attack would actually look like. But Wellerstein, the nuclear historian, created a website called Nukemap that allows users to “drop” a specific bomb — say, the roughly 140-kiloton explosive North Korea tested in September 2017 — on any target. So I did just that, detonating that North Korean device on the Capitol building in the heart of Washington, DC — and, well, see for yourself: Christina Animashaun/Vox Roughly 220,000 people would die from this one attack alone, according to the Nukemap estimate, while another 450,000 would sustain injuries. By comparison, America’s two nuclear attacks on Japan in 1945 killed and injured a total of around 200,000 people (granted, Hiroshima and Nagasaki had smaller populations than the Washington metro area). It’s very likely that North Korea wouldn’t launch just one bomb, but multiple at DC and likely some at New York City, the West Coast, and possibly US military bases in Guam and/or Hawaii. But for simplicity’s sake, let’s focus on the effects of this one horrible attack. The center yellow circle is the fireball radius — that is, the mushroom cloud — which would extend out about 0.25 square miles. Those within the green circle, approximately a 1.2-square-mile area, would face the heaviest dose of radiation. “Without medical treatment, there can be expected between 50% and 90% mortality from acute effects alone. Dying takes between several hours and several weeks,” according to the website. Radiation poisoning is a horrible way to die. Here are just some of the symptoms people sick with radiation get: Nausea and vomiting Spontaneous bleeding Diarrhea, sometimes bloody Severely burnt skin that may peel off The dark grey circle in the middle is where a shock wave does a lot of damage. In that 17-square-mile area, the bomb would flatten residential buildings, certainly killing people in or near them. Debris and fire would be everywhere. People in the bigger yellow circle, a 33.5-square-mile area, would receive third-degree burns. “There’s a bright flash of light,” Brian Toon, a scientist and expert on nuclear disasters at the University of Colorado Boulder, told me about when the bomb goes off. Those exposed to the light, which would stretch for miles, would get those burns if their skin were exposed. The light would also “easily ignite fires with flammable objects like leaves, twigs, paper, or your clothing,” he added. The victims may not feel much pain, however, because the burn will destroy pain nerves. Still, some will suffer major scarring or have the inability to use certain limbs, and others might require amputation, according to Wellerstein’s site. A mother tends her injured child, a victim of the atomic bomb blast at Hiroshima. A mother tends her injured child, a victim of the atomic bomb blast at Hiroshima. Keystone/Getty Images The biggest circle encompasses the near entirety of the air-blast zone: a 134-square-mile area. People can still die, or at least receive severe injuries, in that location. The blast would break windows, and those standing near the glass might be killed by shards, or at least shed blood from myriad cuts. Those who survive the bombing and its effects will have to walk through burning rubble and pass lifeless, charred bodies to reach safety. Some of them will ultimately survive, but others will succumb to sustained injuries or radiation. The wind, meanwhile, will carry the irradiated debris and objects — known as fallout because they drop from the sky — far outside the blast zone and sicken countless others. As for Washington, it will likely take decades and billions of dollars not only to rebuild the city but clean it of radiation entirely. It’s worth reiterating that all of the above are estimates for one strike on one location. An actual nuclear war would have much wider and more devastating consequences. And if that war spiraled out of control, the effects after the conflict would be much worse than the attacks themselves — and change the course of human history. “Almost everybody on the planet would die” It’s possible you have an idea of what a post-nuclear hellscape looks like. After all, disaster movies are obsessed with that kind of world. But scientists and other nuclear experts care deeply about this issue too — and their research shows the movies may be too optimistic. Alan Robock, an environmental sciences professor at Rutgers University, has spent decades trying to understand what a nuclear war would do to the planet. The sum of his work, along with other colleagues’, is based on economic, scientific, and agricultural models. Here’s what he found: The most devastating long-term effects of a nuclear war actually come down to the black smoke, along with the dust and particulates in the air, that attacks produce. People walking through the ruins of Hiroshima in the weeks following the atomic bomb blast. People walking through the ruins of Hiroshima in the weeks following the atomic bomb blast. Bernard Hoffman/The LIFE Picture Collection/Getty Images In a nuclear war, cities and industrial areas would be targeted, thereby producing tons of smoke as they burn. Some of that smoke would make it into the stratosphere — above the weather — where it would stay for years because there’s no rain to wash it out. That smoke would expand around the world as it heats up, blocking out sunlight over much of Earth. As a result, the world would experience colder temperatures and less precipitation, depleting much of the globe’s agricultural output. That, potentially, would lead to widespread famine in a matter of years. The impact on the world, however, depends on the amount of rising smoke. While scientists’ models and estimates vary, it’s believed that around 5 million to 50 millions tons of black smoke could lead to a so-called “nuclear autumn,” while 50 million to 150 millions tons of black smoke might plunge the world into a “nuclear winter.” If the latter scenario came to pass, Robock told me, “almost everybody on the planet would die.”

### 1AC---Plan

#### Plan: The United States federal government should restrict significantly anticompetitive unilateral exclusion in the technology sector.

### 1AC---Solvency

#### Contention 3 is Solvency.

#### The plan deters and remedies exclusionary conduct.

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, pg. 42-43, 01/15/2021, SSRN.

The tech giants, as we have seen, have excluded third parties selling on their platforms by demoting them in search results, using nonpublic seller-specific data to boost their own products, or refusing to deal with them simply because they are competitors. While this behavior is not widespread, it appears to be unjustified and anticompetitive. It enhances the tech giants’ market power and injures their customers. Yet no one in the United States has successfully challenged any of this conduct.

The most likely reason is that the conduct did not violate the Sherman Act. It is unilateral, not collusive, and it did not result in actual or imminent monopoly power. 224 This gap should be closed. The Sherman Act should be amended to reach unilateral exclusion by the tech giants that reduces competition significantly, even if it is unlikely to generate or maintain monopoly power. Further, the Department of Justice and the FTC should be authorized to obtain civil penalties if they establish a violation of this new section. This would couple public civil penalty enforcement with private treble damage actions, magnifying the deterrent effect of antitrust law.

These twin sanctions would alter the tech giants’ financial calculus. They would not deploy exclusionary tactics unless the likely gains outweighed the prospect of substantial financial penalties. Of course, that might not stop them in every case. They may figure that if they can disable rivals for a time they can achieve sufficient scale economies or network effects to ward off future entry, thereby earning long-run profits that would exceed the cost of any sanctions they have to pay.225 But they cannot count on that and the issue is not easy to resolve.226 In the face of such uncertainty, stiff financial sanctions are likely to reduce the incidence of exclusionary conduct. This is particularly so in complementary product markets, where the tech giants cannot generally hope to gain the scale and network advantages they possess in their core businesses.227 \*\*\*FOOTNOTE BEGINS\*\*\* 227 For example, Amazon sells private label batteries on amazon.com. Even if it could capture more of this complementary market for itself, it is unlikely to attain significant advantages over third party competitors like Eveready and Duracell. \*\*\*FOOTNOTE ENDS\*\*\*

The existence of Section 5 of the Federal Trade Commission Act is no reason not to expand the Sherman Act. In theory, Section 5 covers anticompetitive conduct that falls short of monopolization, but as Section A explains, its remedies are limited and its track record has been disappointing. Section B addresses the risk that expanding the Sherman Act would unduly deter procompetitive conduct. This risk can be minimized, however, by confining the amendment to the tech giants and including proof requirements that would defeat most challenges to desirable conduct. Section C describes the recent Congressional support for this change. Section D uses a detailed example to demonstrate that it would be workable in practice.

### IF TIME

#### Back to Realignment.

#### Only federal agencies, particularly the FTC, can ensure effective cross-border coordination with the EC to mitigate disputes.

Despina Pachnou 17, Organization for Economic Co-operation and Development, "Directorate for Financial and Enterprise Affairs Competition Committee," Roundtable on the Extraterritorial Reach of Competition Remedies, Working Party No. 3: Co-operation and Enforcement, December 2017, pg. 8-11.

5. The Agencies’ Cooperation with Foreign Jurisdictions on Remedies

18. Achieving effective remedies often entails cooperation with foreign jurisdictions. Such cooperation may allow the U.S. agencies to secure relief that sufficiently protects U.S. competition and consumers without applying the remedy to conduct or assets outside the United States. When an extraterritorial remedy is necessary to address harm or threatened harm to U.S. commerce and consumers, cooperation helps to minimize the risk of conflict with obligations of foreign laws or foreign remedial orders.35 Cooperation and coordination on remedies can be efficient for enforcers and the parties under investigation, especially given that over 130 jurisdictions have antitrust laws and over 80 require pre-merger notification. Cooperation may result in a remedies package that addresses competition concerns in multiple jurisdictions.36 The Agencies work closely with competition enforcers in other jurisdictions on cases under common review, including to help foster convergence and consistent remedy determinations.37

6. U.S. Case Examples

19. To the extent that the Agencies rely on extraterritorial remedies, they do so in both merger and conduct cases, although they arise most frequently in the merger context. In all cases, the Agencies seek remedies that are appropriately tailored and that do not apply extraterritorially unless necessary to address the harm or threatened harm to U.S. commerce or consumers.

6.1. Merger Cases

20. In most mergers, the Agencies can obtain an effective remedy for U.S. competition and consumers without extraterritorial divestitures or other relief. This is the case even when an Agency coordinates with other jurisdictions in investigating a transaction that raises concerns in both domestic markets and markets outside the U.S. Even in these instances, however, coordination between jurisdictions can be helpful. For example, the FTC benefited from coordinating with antitrust authorities in Canada, the EU, and Mexico during the investigation of Emerson Electric Co.’s acquisition of Pentair plc, even though the potential harm to U.S. markets was resolved exclusively through the divestiture of a U.S. switchbox facility.38 Similarly, in the General Electric-Alstom SA merger, effective relief for U.S. markets required divestiture of only U.S. based assets; however, coordination between the Department and the EC in connection with the Department’s investigation “facilitated [the Department’s] investigation and helped formulate remedies that [preserved] competition in the United States and internationally.”39 A coordinated remedy resulted in the Department and the EC announcing separate settlements that eliminated harm to consumers in their respective jurisdictions. 40 There are many more cases in which the Agencies have coordinated with their foreign counterparts on mergers that affect multiple jurisdictions.41

21. Although a merger may affect competition in several jurisdictions, the Agencies focus on preserving competition in the domestic markets that may be harmed by the proposed acquisition. On some occasions, relief secured by foreign jurisdictions means that no remedy, domestic or extraterritorial, is necessary to protect domestic competition. Though our experience in deferring to another authority’s remedy is limited, we have relied on informal deference and remain interested in doing so, under the right conditions. A notable example was in connection with Cisco’s acquisition of Tandberg in 2010. The Department declined to challenge the merger in part due to certain commitments that Cisco made to the European Commission (EC) to facilitate interoperability in products related to a type of videoconferencing called telepresence. Waivers of confidentiality by the parties and industry participants allowed the Department and the EC to cooperate closely in their parallel reviews of the transaction, resulting in an efficient outcome for the enforcers and the merging parties.42

22. Nevertheless, certain merger investigations resolved by consent decree have required the divestiture of assets located outside the United States to preserve competition within the United States. For example, the FTC consent decree resolving concerns regarding the merger of cement manufacturers Holcim Ltd. and Lafarge SA required, in part, divestiture of a Canadian cement plant and related U.S. terminals along with two Canadian terminals related to a U.S. cement plant. The FTC explained that the divested assets “remedy competitive concerns in northern U.S. markets [and are] part of a larger group of Holcim assets located in Canada that Holcim and Lafarge have agreed to divest to address competitive concerns raised by the [Canadian Competition Bureau (“CCB”)]. Commission staff worked closely with staff from the CCB to reach outcomes that benefit consumers in the United States.” 43 An extraterritorial remedy was also required to resolve Department’s investigation of the Anheuser-Busch InBev SA/NV & Grupo Modelo S.A.B. merger. The consent decree in that matter similarly required divestiture of a facility outside of the United States, the Grupo Modelo brewery in Mexico, and a perpetual and exclusive U.S. trademark license to the seven brands of beer that Modelo then offered in the United States, as well as three brands not yet offered in the United States, but currently sold by Modelo in Mexico. This remedy allowed the acquirer “to meet current and future demand for Modelo Brand Beer in the United States,” which resolved concerns that the merger would harm competition in twenty-six local U.S. markets. 44

# 2AC

## Competition ADV

### Innovation Turn---2AC

#### Present tech innovation is inefficient AND useless.

Ashish Arora et al. 20, Senior Associate Dean for Strategy. Rex D. Adams Professor of Business Administration, Fuqua School of Business, Duke University; Sharon Belenzon, Professor, Strategy, Fuqua School of Business, Duke University. Research Associate, National Bureau of Economic Research; Andrea Patacconi, Professor, Strategy, Norwich Business School; Jungkyu Suh, PhD, Business, Duke University, "The Changing Structure of American Innovation: Some Cautionary Remarks for Economic Growth," Innovation Policy and the Economy, Vol. 20, 2020, NBER.

A defining feature of modern economic growth is the systematic application of science to advance technology. Many innovations that spurred economic growth in the twentieth century, including synthetic fibers, plastics, integrated circuits, and gene therapy, originated from advances in the natural sciences, engineering, and medicine. Science, by producing “a potential for technology far greater than existed previously,” clearly distinguishes modern economic growth from previous economic epochs (Kuznets 1971).

However, despite sustained increases in the quantity of scientific knowledge, productivity growth in most advanced economies has stagnated in recent decades in comparison to a “golden age” in the mid-twentieth century. Using data from the United States, Gordon (2016) shows that real gross domestic product (GDP) per hour (i.e., labor productivity) grew substantially in the middle of the twentieth century, from 1.79% per year between 1870 and 1920 to 2.82% per year between 1920 and 1970. However, in the most recent period (1970–2014), productivity grew by a modest 1.62% per year. Gordon concludes that productivity rose between 1920 and 1970 largely because of significant technological progress, but more recently technical advance has been much less potent in spurring growth. This slowdown is surprising given the sustained expansion of scientific input (measured in terms of research dollars spent) and output (measured by academic articles published) from American academia, as shown in figure 1.1

Chart

Description automatically generated

Gordon (2016) attributes the rapid pace of technological progress between 1920 and 1970 to the development and extension of earlier fundamental technologies, such as the internal combustion engine and electricity. This process, which was often accompanied by important advances in science and engineering, was largely carried out by researchers working in corporate labs, which by the 1920s had replaced individual entrepreneurs as the primary source of American invention. As Gordon writes:

Much of the early development of the automobile culminating in the powerful Chevrolets and Buicks of 1940–41 was achieved at the GM corporate research labs. Similarly, much of the development of the electronic computer was carried out in the corporate laboratories of IBM, Bell Labs, and other large firms. The transistor, the fundamental building block of modern electronics and digital innovation, was invented by a team led by William Shockley at Bell Labs in late 1947. The corporate R&D division of IBM pioneered most of the advances of the mainframe computer era from 1950 to 1980. Improvements in consumer electric appliances occurred at large firms such as General Electric, General Motors and Whirlpool, while RCA led the early development of television.

(Gordon 2016, 571–72)

By the 1980s, however, many corporations began to look to universities and small start-ups for ideas and new products.2 Large corporations’ reliance on externally sourced inventions grew, and many leading Western corporations began to withdraw from scientific research (Mowery 2009; Arora, Belenzon, and Patacconi 2018). Some corporate labs were shut down and others spun off as independent entities. Bell Labs had been separated from parent company AT&T and was placed under Lucent in 1996; Xerox PARC had also been spun off into a separate company in 2002. Others had been downsized: IBM under Louis Gerstner redirected research toward more commercial applications in the mid-1990s (Bhaskarabhatla and Hegde 2014).3 A more recent example is DuPont’s closing of its Central Research and Development Lab in 2016. Established in 1903, DuPont research rivaled that of top academic chemistry departments. In the 1960s, DuPont’s central research and development (R&D) unit published more articles in the Journal of the American Chemical Society than Massachusetts Institute of Technology (MIT) and California Institute of Technology (Caltech) combined. However, in the 1990s, DuPont’s attitude toward research changed and after a gradual decline in scientific publications, the company’s management closed its Central Research and Development Lab in 2016.4

These examples are backed by systematic evidence. National Science Foundation (NSF) data indicate that share of research (both basic and applied) in total business R&D in the United States fell from about 30% in 1985 to below 20% in 2015 (fig. 2). The figure also shows that the absolute amount of research in industry, after increasing over the 1980s, barely grew over the 20-year period between 1990 and 2010. Other data show the same decline. Utilizing data on scientific publications, Arora et al. (2018) show that the number of publications per firm fell at a rate of 20% per decade from 1980 to 2006 for R&D performed in American listed firms. The authors also find that the drop is even more dramatic for established firms in high-quality journals. For articles within the top quartile of journal impact factor scores, the magnitude of the drop increases to more than 30%. Large firms’ withdrawal from science can also be gleaned from the list of R&D 100 awards winners. Fortune 500 firms won 41% of the awards in 1971 but only 6% in 2006 (Block and Keller 2009). Over the same period, total industry R&D and patenting grew steadily, as did university-performed research (see fig. 6). This evidence points to the emergence of a new division of innovative labor, with universities focusing on research, large firms focusing on development and commercialization, and spin-offs, start-ups, and university technology licensing offices responsible for connecting the two.

Chart, histogram

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### T Expand Scope---2AC

#### Burden of proof dictates the scope of antitrust.

Andrew I. Gavil & Steven C. Salop 20, Professor of Law, Howard University School of Law; Professor of Economics and Law, Georgetown University Law Center., "Probability, Presumptions and Evidentiary Burdens in Antitrust Analysis: Revitalizing the Rule of Reason for Exclusionary Conduct," University of Pennsylvania Law Review, Vol. 168, No. 7, pg. 2111-2112, 2020, HeinOnline.

The proscribed cure was a combination of greater economic sophistication, reliance on bright-line rules of non-liability, and lessened reliance on brightline rules of liability. The influence of this approach did not end with the analysis of particular practices. The goal of preventing false positives provided a focus for the comparative evaluation of alternative legal rules,15 and became a barometer for evaluating the scope of antitrust prohibitions.16 This translated into a call for a higher evidentiary burden on plaintiffs in cases alleging exclusionary conduct, which included a requirement of more economic evidence to support competitive harm allegations.17

#### ‘Expand’ means to increase the extent.

Merriam-Webster’s 21 Online Dictionary, ‘expand’, https://www.merriam-webster.com/dictionary/expand

transitive verb

1: to open up : UNFOLD

2: to increase the extent, number, volume, or scope of : ENLARGE

#### ‘Scope’ refers to activity at the present time, not the abstract potential application of law.

Frank G. Clement 16 Jr, Judge on the Tennessee Court of Appeals, “Hamer v. Southeast Res. Group, Inc.”, Court of Appeals of Tennessee, At Nashville, 2016 Tenn. App. LEXIS 176, 3/3/2016, Lexis

When interpreting a contract, ordinary words typically have their ordinary meanings unless there is evidence [\*13] that the parties intended for the words to have a special meaning. Madson v. Madson, 636 So. 2d 759, 761 (Fla. Dist. Ct. App. 1994). The ordinary meaning of a word is often described as its meaning in the dictionary. See Siegle v. Progressive Consumers Ins. Co., 788 So. 2d 355, 360 (Fla. Dist. Ct. App. 2001); Beans v. Chohonis, 740 So. 2d 65, 67 (Fla. Dist. Ct. App. 1999). The ordinary meaning of a word or phrase is also described as "a natural meaning or the meaning most commonly understood when considered in relation to the subject matter and circumstances." See J.N. Laliotis Eng'g Constr. v. Mastor, 558 So. 2d 67, 68 (Fla. Dist. Ct. App. 1990) (quoting Granados Quinones v. Swiss Bank Corp., 509 So. 2d 273, 275 (Fla. 1987)).

If parties wish to depart from the ordinary meaning of common words and assign uncommon meanings to them, they must do so explicitly. See Madson, 636 So. 2d at 761. "One who would ascribe an exotic meaning to a term in a contract which otherwise has perfectly ordinary connotations must take pains to define the term either expressly or by express reference." E. Ins. Co. v. Austin, 396 So. 2d 823, 825 (Fla. Dist. Ct. App. 1981); see Russ v. State, 832 So. 2d 901, 907 (Fla. Dist. Ct. App. 2002) ("[W]here a statute does not specifically define words of common usage, such words are construed in their plain and ordinary sense." (alteration in original)); Koplowitz v. Imperial Towers Condo., Inc., 478 So. 2d 504, 505 (Fla. Dist. Ct. App. 1985) ("Whether they appear in a statute or in a declaration of condominium, words of common usage should be construed in their plain and ordinary sense.").

Here, this dispute exists because the parties' agreement does not define "scope" or "scope and purpose." Furthermore, the agreement does not identify the point in time when the "scope" of [\*14] Action's business is to be determined. Southeast contends that "scope and purpose" is ambiguous because it is susceptible to multiple reasonable interpretations. According to Southeast, "scope and purpose" means "at a minimum any business opportunity to be marketed to credit union members, including the telemedicine opportunity." However, the entirety of the parties' agreement and the "inconvenience, hardship, or absurdity" that would result from Southeast's proposed interpretation demonstrate that the agreement is not ambiguous and that the parties intended for the words "scope and purpose" to have their ordinary meanings. See Branscombe, 76 So. 3d at 948.

"Scope" and "purpose" are commonly-used words with commonly-understood meanings. Therefore, if the parties intended to ascribe an uncommon meaning to "scope" or "scope and purpose," they should have explicitly defined those terms. See E. Ins. Co., 396 So. 2d at 825. Instead of explicitly stating that these words have an uncommon definition, the agreement provides that its terms, covenants, and provisions "shall be construed simply and according to [their] fair meaning[s] . . . ." Consequently, the failure to specify a unique meaning for "scope and purpose" and the inclusion of the above-quoted section [\*15] indicate that the parties intended for these words to have their ordinary meanings. See id.; see also Russ, 832 So. 2d at 907; Koplowitz, 478 So. 2d at 505.

Under Southeast's interpretation, Plaintiff agreed to disclose and make available every business opportunity "to be marketed to credit union members." Such a broad definition appears to encompass every product or service imaginable, whether they have anything to do with Action or not. Under this interpretation, Plaintiff would be required to disclose an opportunity to sell cars to credit union members even though Action's business is not related to cars at all. The inconvenience, hardship, or absurdity that would result are weighty evidence that the parties did not intend for "scope and purpose" to have this meaning, especially when interpreting the agreement based on the ordinary meaning of "scope" avoids these difficulties. See Branscombe, 76 So. 3d at 948 HN9 ("The inconvenience, hardship, or absurdity of one interpretation of a contract or its contradiction of the general purpose is weighty evidence that such meaning was not intended when the language is open to an interpretation which is neither absurd nor frivolous and is in agreement with the general purpose of the parties.").

HN10 The ordinary meaning of words is found in the dictionary and is the most commonly understood meaning in relation to the subject matter of the parties' agreement. See Siegle, 788 So.2d at 360; Beans, 740 So. 2d at 67; J.N. Laliotis, 558 So. 2d at 68. According to one dictionary, "scope" means "1. The range of one's perceptions, thoughts, or actions. 2. Breath or opportunity to function. 3. The area covered by a given activity or subject." The American Heritage College Dictionary 1222 (3d ed. 1997). The operating agreement is concerned with the relationship of Action's members to each other and to Action, and the subject matter of section 6.6 is the duty to make certain business opportunities available to Action in order to avoid competition between Action and its members. [\*18] Based on the dictionary and the subject matter of the parties' agreement, "scope" most naturally refers to the range or breadth of the business that Action is engaged in at the relevant time.

Southeast contends this interpretation renders "purpose" redundant because "by definition, scope would always be within the purpose." We respectfully disagree. Contrary to Southeast's contentions, "scope" and "purpose" refer to different concepts. "Purpose" is aspirational and refers to what Action is capable of doing in the future (i.e. all lawful business for limited liability companies). In contrast, "scope" refers to what Action actually is doing or has done at the relevant point in time. Thus, an opportunity might be within Action's scope but not its purpose if, for example, Action had been organized for a limited purpose (e.g. to acquire real estate in Florida) but was in fact also engaged in the business of selling disposable mobile phones to college students. In this example, a business opportunity to sell mobile phones to college students would be within Action's scope but not its purpose.

Therefore, under the ordinary meaning of "scope," a member is required to disclose a business opportunity [\*19] if that opportunity (1) is within Action's aspirational goal — its purpose; and (2) is within the area that Action's business has or is actually covering at the relevant point in time. As a result, interpreting "scope" according to its ordinary meaning does not render any part of the agreement redundant.

Having concluded that "scope" refers to the breadth of the business Action is or has engaged in, we must turn our attention to determining when Action's "scope" should be assessed. The agreement does not specify whether Action's scope is to be determined as of the date of the agreement, the date of the discovery of an opportunity, or some other date. After reviewing the agreement, we conclude that the parties intended for Action's scope to be determined at the time when a member seeks to pursue the business opportunity in question.

#### ‘Core’ antitrust are the big 3

Michael A. Rataj 21, PC, Law Degree from the Detroit College of Law, “Consequences for Breaking Antitrust Laws”, 5/12/2021, https://www.michaelrataj.com/blog/2021/05/consequences-for-breaking-antitrust-laws/

The core antitrust laws are…

The three core antitrust laws are the Sherman Act, the Federal Trade Commission Act and the Clayton Act. The Sherman Act primarily prohibits unreasonable restraint of trade and monopolization. Those who are in violation of the Sherman Act may face hefty fines, up to $100 million, and up to 10 years behind bars.

The FTC Act prohibits unfair practices or acts and unfair approaches to harming competition. Only the FTC can file cases under this act. The Clayton Act is a catch-all that covers every practice not covered by the Sherman and FTC Acts. Then consequences for violations of both of these acts are usually civil in nature.

### Capitalism K---2AC

#### Growth is sustainable AND transition fails.

Kelsey Piper 21, Staff Writer, Vox. BS, Symbolic Systems, "Can we save the planet by shrinking the economy?" Vox, 08/02/2021, https://www.vox.com/future-perfect/22408556/save-planet-shrink-economy-degrowth/

Most of the world is very poor. Billions of people go hungry, can’t afford a doctor when they get sick, don’t have adequate shelter and sanitation, and struggle to exercise the freedoms essential to a good life because of material deprivation.

But for all the immiseration around us, one thing is undeniable: For the past several centuries — and especially for the past 70 years, since the end of World War II — the world has been getting much richer.

That economic boom means a lot of things. It means cancer treatments and neonatal intensive care units and smallpox vaccines and insulin.

It means, in many parts of the world, houses have indoor plumbing and gas heating and electricity.

It means that infant mortality is down and life expectancies are longer.

But an increasingly wealthy world also means we eat more meat, mostly from factory-farmed animals. It means we emit lots more greenhouse gases. It means that consumers in developed countries buy a lot and throw away a lot.

In other words, it means a lot of good things and certainly some bad things as well.

Mainstream climate and environmental policy has developed over the years with a certain assumption — that we can get rid of the bad things while still preserving the good things. That is, it’s sought to figure out how to reduce carbon emissions, preserve ecosystems, and save endangered species while continuing to improve material living conditions for everyone in the world.

But to a vocal slice of climate activists, that approach seems increasingly doomed. The degrowth movement, as it’s called, argues that humanity can’t keep growing without driving humanity into climate catastrophe. The only solution, the argument goes, is an extreme transformation of our way of life — a transition away from treating economic growth as a policy priority to an acceptance of shrinking GDP as a prerequisite to saving the planet.

At the core of degrowth is the climate crisis. Degrowth’s proponents argue that to save Earth, humans need to shrink global economic activity, because at our current levels of consumption, the world won’t hit the IPCC target of stabilizing global temperatures at no more than 1.5 degrees of warming. The degrowth movement argues that climate change should prompt a radical rethinking of economic growth, and policymakers serious about climate change should try to build a livable world without economic growth fueling it.

It’s a bold, even romantic vision. But there are two problems with it: It doesn’t add up — and it would be nearly impossible to implement.

Addressing climate change will take genuinely radical changes to how our society works. Stirring as it might be to some, though, degrowth’s radicalism won’t fix the climate. Degrowth is most compelling as a personal ethos, a lens on your consumption habits, a way of life. What it’s not is a serious policy program to solve climate change, especially in a world where billions still live in poverty.

The basics of degrowth

Pinning down what degrowth means can be tricky because degrowthers often differ on details. But there are some common threads to their thought.

In general, degrowthers believe that in the modern world, economic growth has become unmoored from improvements in the human condition.

Jason Hickel, an anthropologist at the London School of Economics and the author of Less Is More: How Degrowth Will Save the World, has emerged as one of the leading spokespeople for the movement. To Hickel, the case for degrowth goes like this: The world is producing too much greenhouse gases. It is also overfishing, is overpolluting, is unsustainable in a dozen ways, from deforestation to plastic accumulating in the oceans.

Scientists have made impressive progress on technologies that, he argues, should have been sufficient to address the climate crisis — think solar panels, meat alternatives, eco-friendly houses. But because wealthy societies are so focused on growing the economy, those gains have been immediately plowed back into the economy, producing more stuff for the same ecological footprint, yes, but not actually shrinking the ecological footprint.

Hickel argues that this problem is unsolvable within our current framework. “In a growth-oriented economy,” he writes in Less Is More, “efficiency improvements that could help us reduce our impact are harnessed instead to advance the objectives of growth — to pull ever-larger swaths of nature into circuits of extraction and production. It’s not our technology that’s the problem. It’s growth.”

His solution? To abandon the lodestar of economic policy in nearly every country, which is to aim for economic growth over time, increasing wealth per person and expanding the ability of their citizens to purchase the things they want and need. Instead, Hickel argues, rich countries should focus on getting emissions to zero — even if the result is a much-contracted economy.

If that sounds unappealing, he devoted much of the book — and much of our interview — to arguing that it wouldn’t be. He points out that some countries, like the United States, are rich but get very little for their spending, in terms of national well-being; poorer countries like Spain have better health care systems. He argues that current levels of well-being could be maintained at a tenth of Finland’s current GDP — assuming that society also adopted wide-scale redistribution and socialist labor policies.

At the heart of Hickel’s argument is an idea that divides degrowthers and their critics: the concept of “decoupling” growth from environmental impact. Hickel and his fellow degrowthers are skeptical that economic growth as we know it can ever truly be achieved without accompanying growth in emissions.

But critics argue that not only is it possible — it’s already been happening. For the past decade, as many countries have transitioned to green energy, they have successfully seen their emissions shrink while their GDP has grown.

“There have been really big changes since 2005,” when people were debating whether decoupling was even possible, Zeke Hausfather, a climate scientist at the Breakthrough Institute, told me. “Green energy has gotten cheap. Solar power is the cheapest energy at the margins in every country today. Global coal use has peaked.” His research finds evidence of “absolute decoupling” — emissions shrinking while GDP grows — in 32 countries, including the United States, the United Kingdom, and Germany.

Degrowthers I spoke to don’t dispute that decoupling is possible. But they argue it won’t be enough to shrink emissions as rapidly as they need to. And there’s a compelling bit of evidence for that view: Even as some countries have decoupled, others have increased emissions, and overall atmospheric carbon is at its highest level ever recorded.

Where an optimist might see, in the decoupling of the past few decades, signs that growth and climate solutions can coexist, a pessimist might find the degrowth diagnosis more persuasive: that our growth-focused society clearly isn’t up to the task of solving climate change.

The pessimists have picked up momentum of late. It’s true, in one sense, that degrowth is a somewhat fringe idea: No politician has endorsed it, and no serious policy proposals based on it have been put forth. But degrowth has nonetheless drawn sympathy in some quarters — including among prominent climate thinkers.

Steven Chu, who served as secretary of energy under President Obama, has endorsed it, arguing, “You have to design an economy based on no growth or even shrinking growth.”

More than 11,000 scientists signed William Ripple’s 2019 letter “World Scientists’ Warning of a Climate Emergency,” which argues “our goals need to shift from GDP growth and the pursuit of affluence toward sustaining ecosystems and improving human well-being by prioritizing basic needs and reducing inequality.”

And a recent paper in Nature explored how a “degrowth” of 0.5 percent of GDP per year might interact with climate and emissions targets, arguing that while “substantial challenges remain regarding political feasibility,” such approaches should be “thoroughly considered.”

The tension at the heart of degrowth: Can we fix global poverty without economic growth?

One big problem with degrowth is this simple fact: In the coming decades, most carbon emissions won’t be coming from rich countries like the US — they’ll be happening in newly middle-income countries, like India, China, or Indonesia. Already, developing nations account for 63 percent of emissions, and they’re expected to account for even more as they develop further and as the rich world decarbonizes.

Even if emissions in rich countries go to zero very soon, climate change is set to worsen as poorer countries increase their own emissions.

That will, of course, have deeply negative climate impacts. But the alternative is a nonstarter — should the world really prioritize curbing emissions and economic growth if it meant suppressing the growth of those countries?

Degrowthers see no dilemma here. What Hickel envisions is global movement in two directions: Poor countries could develop up to a certain level of prosperity and then stop; rich countries could develop down to that level and then stop. Thus, climate catastrophe could be averted, all while making the world’s poor more prosperous.

“Rich countries urgently need to reduce their excess energy and resource use to sustainable levels so our sisters and brothers in the global South can live well too,” Hickel put it. “We live on an abundant planet and we can all flourish on it together, but to do so we have to share it more fairly, and build economies that are designed around meeting human needs rather than around perpetual growth.”

From a climate change perspective, though, there’s a problem. First, it means that degrowth would do nothing about the bulk of emissions, which are occurring in developing countries.

Second, the global economy is more interconnected than Hickel implies. When Covid-19 hit, poor countries were devastated not just by the virus but by the aftershocks of virus-induced slowdowns in consumption in rich countries.

There’s some genuine appeal to the idea of an end to “consumerism,” but the pandemic offered a taste of how a sudden drop in rich-world consumption would actually affect the developing world. Covid-19 dramatically curtailed Western imports and tourism for a time. The consequences in poor countries were devastating. Hunger rose, and child mortality followed.

Covid-19, of course, wreaked direct economic havoc at the same time, with lockdowns having an especially negative impact on some poor countries; the effects of the pandemic and international demand shock were combined, and in some cases they’re hard to separate. But the United Nations, the World Bank, and expert analyses point to the decline in global consumption as a significant part of the picture.

Degrowthers reject this concern on two fronts: First, they argue that a sustained, deliberate reduction in consumption wouldn’t be anything like a recession. Recessions, they agree, are really bad, but that’s because consumption falls in affected sectors, instead of being targeted at things that don’t improve well-being. Degrowth, they say, would be different.

Second, they contend that there is some path to economic growth in poor countries that doesn’t rely on trade with rich ones — certainly some countries managed economic growth when the whole world was poor, after all.

Hickel’s perspective is that most trade between rich and poor countries is extractive, not mutually beneficial — and that maybe when that dynamic ceases, poor countries will have the chance for the catch-up growth they merit. That’s one take. But it means that degrowth’s case for not crushing the poor world is predicated on a speculative take on how those countries can grow — one that democratically elected leaders in those countries largely don’t share.

What GDP doesn’t capture — and what it can tell us

In a way, the debate over degrowth is a debate over the meaning of one economic indicator: gross domestic product (GDP).

GDP measures the transactions within an economy — all the occasions when money changes hands in exchange for goods and services. It’s not wealth, but it’s one of the primary ways we measure wealth.

It certainly doesn’t capture everything of value. When parents spend a quiet weekend at home teaching their children to read, for example, nothing GDP-generating has happened — but value has certainly been created.

Degrowth articles burst with such examples. GDP, they love to point out, includes the production of things like nerve gas, even though that has no social value. And it doesn’t include storytelling, singing, gardening, and other simple human pleasures.

“If our washing machines, fridges, and phones lasted twice as long, we would consume half as many (thus the output of those industries would decline), but with zero reduction in our access to those goods,” Hickel told me. If everyone worked half the hours they currently do, and made half the income, they might mostly be better off — at least, assuming that their basic needs were still met.

“We propose policies like a living wage, a maximum income ratio, wealth taxes, etc. to accomplish this,” Hickel told me. “Given all of this, the language of poverty really gets it wrong: longer-lasting products, living wages, shorter working weeks, better access to public services and affordable housing — we are calling for the opposite of poverty. Yes, industries like SUVs and fast fashion would decline, but that doesn’t mean poverty. We can replace them with public transportation and longer-lasting fashion, thus meeting everyone’s needs.”

There’s a lot of speculation here, and a lot of what degrowth’s critics would call hand-waving. Degrowth is fundamentally premised on the claim that we can cease to focus on growth while getting better than ever at addressing human needs. If that’s true, then that would certainly be great news.

But in many ways, it’s a vision more wildly optimistic — disconnected from actual policy results — than any of the more standard “sustainable development” models degrowthers criticize for being out of touch.

First, in the world today, there’s an extremely strong association between growth and welfare outcomes of every kind. GDP, while imperfect, is a better predictor of a country’s welfare state, outcomes for poor citizens in that country, and well-being measures like leisure time and life expectancy than any other measure.

“GDP does leave out non-commercialized activities that are welfare-enhancing,” economist Branko Milanovic writes in a rebuttal of degrowth:

It is, like every other measure, imperfect and one-dimensional. But ... it is imperfect at the edges while fairly accurate overall. Richer countries are countries that are generally better-off in almost all metrics, from education, life expectancy, child mortality to women’s employment etc. Not only that: richer people are also on average healthier, better educated, and happier. Income indeed buys you health and happiness. (It does not guarantee that you are a better person; but that’s a different topic.) The metric of income or GDP is strongly associated with positive outcomes, whether we compare countries to each other, or people (within a country) to each other.

The things degrowthers care about — leisure time, health care, life expectancy — are strongly correlated with societal wealth. The generosity of a welfare state and the availability of transfers to a state’s poorest people are also strongly correlated with societal wealth. Innovation, discovery, invention, and medical technology improvements are also strongly correlated with societal wealth.

The strong correlation between child mortality and GDP per capita is apparent on the above graph. There are some outliers — some countries outperform or underperform their GDP somewhat, in terms of preventing child deaths — but in general, wealth strongly predicts child survival. No single, simple medical intervention causes the difference. Wealthier societies on average get better health outcomes across the board.

This graph looks at child mortality not just by comparing rich countries to poor ones but also by comparing countries over time, as they get richer: Getting richer improves outcomes for children.

Leisure time, too, has increased — and hours worked have declined — as the world has gotten wealthier.

It might be possible in principle to do better — to decouple, if you will, health and well-being from access to material resources, so that everyone is well-off with many fewer resources.

But the examples degrowthers point to remain speculative ones; if we ought to be skeptical, as degrowthers argue we should be, about the decoupling of wealth from ecological impact, we ought to be at least as skeptical about the prospects of decoupling wealth from living standards.

“In the end, economic growth is about the production of stuff that people need and then the consumption of those things by the people who need it,” Max Roser at Our World in Data, a research institute focused on finding, visualizing, and communicating historical economic and health data, told me. He added:

The money aspect, and the abstract concept of GDP, distract us and make it less obvious what it’s actually about. People want to have enough food, they need to go to the doctor, they need childcare, they want a good education. People need lots of stuff, and one thing that people care about are goods and services, and they need to be produced, and economic growth is about an increase in the quality and quantity of the goods and services that people need.

There’s also the knotty problem of who gets to decide which goods and services people choose to spend their money on. Many of the climate scientists I spoke to shared Hickel’s impatience for many specific carbon-intensive modern industries. “I’m not going to defend bitcoin,” the Breakthrough Institute’s Hausfather told me. (The cryptocurrency has attracted intense criticism for being astoundingly carbon-intensive.)

But there is a lot in between bitcoin and basic subsistence needs. And “enough for everyone who needs it” inherently requires value judgments about what people really need, and what things they value that are frivolous luxuries. That’s why so many anti-poverty programs have moved away from giving people “what they need” toward just giving them cash — that is, giving them wealth, which they can choose to spend however they please.

“Even poor people have so many needs for goods and services that you can’t possibly put them on a list and say, ‘Now we’re done here,’” Roser told me. “That’s the beauty of money, that you can just go out there and get what you need rather than what some researcher determines are your needs.”

Degrowth is unrealistic — and gaining traction

As a policy program, degrowth suffers from being both too radical and not radical enough.

There’s a lot of broad-brush policy prescriptions in the degrowth lit, but those details never really add up.

While it’s not a short book, Less Is More feels surprisingly sparse when it comes to envisioning how the changes it recommends could be brought about. The chapter on solutions recommends cutting the workweek and changing tax policy — two solid proposals — but then rounds that out by recommending ending technological obsolescence, advertising, food waste, and student debt.

I’m not particularly opposed to those policies. But they seem laughably inadequate for the magnitude of the task at hand: confronting the climate crisis. Degrowth successfully persuades that guiding humanity and our planet through the 21st century will be really, really hard — but not in a way degrowth particularly solves.

Where degrowth literature is relentlessly pessimistic about the prospect of our problems being solved under our current economic system, it turns oddly optimistic about the prospect that they’ll be solved once we embrace a different way of viewing wealth and progress. If cutting carbon emissions fast enough to matter requires shrinking the global economy by 0.5 percent a year indefinitely, starting right now, as the Nature paper estimates, that’ll take policy measures much larger and more ambitious than any proposed in Less Is More.

“If we are to avert catastrophic warming, we have to lower carbon emissions by a factor of two within the next 10 years. I find it highly implausible that capitalism/market economics will be abandoned by the world on that time frame,” Pennsylvania State University climatologist Michael Mann told me. “That means we have to act on the climate crisis within the framework of the current system.”

In that sense, there’s actually something anti-radical about any climate plan so radical that it can’t be concretely brought about in the next decade.

And yet, implausible as it is, degrowth is gaining a foothold in intellectual and policy circles. What accounts for its seemingly growing popularity? This was a question that puzzled me until I heard the same answer from one degrowth advocate and one opponent: that it’s not, really, exactly about climate.

“It started in the 1990s in France, picking up on radical European politics in the 1970s,” Giorgos Kallis, a researcher studying degrowth at the Universitat Autònoma de Barcelona, told me. “There was an in-between political space there — radical greens, putting much more emphasis on localized production, emphasis on conviviality and autonomy. This is a discourse that comes from them. It wasn’t just about avoiding a particular environmental problem. It was a holistic proposal.”

That was also the diagnosis of Zion Lights, a former spokesperson for Extinction Rebellion, who has become one of the climate movement’s internal critics, arguing that the movement focuses too much on environmentalist-friendly proposals that have nothing to do with climate.

“It has become difficult to talk about making energy policies for combating climate change, for example, without being told that such thinking is actually irrelevant because it doesn’t involve system change,” she recently argued. “We need cheap, clean energy at scale and we need it now.”

In that sense, a good analogy for degrowth might actually be locavorism — the movement that focuses on eating food grown locally. It’s popular with environmentalists, both those whose convictions are about climate change and those who long for a return to the land. Its actual climate impacts are limited or even negative — for some products, it’s better for them to be grown in their optimal environment even with carbon-intensive shipping — and it definitely does less for the climate than, for example, going vegan. But it retains its allure.

How to fight climate change while building good human societies

Degrowth’s radicalism isn’t where I part ways with it: The future will almost certainly require us to eat much less meat, dramatically change land use, and potentially invest a significant chunk of society’s resources in mitigation indefinitely.

But I don’t tend to see such efforts as fundamentally futile. Degrowthers do — even when there have been significant successes.

Climate scientists have spent a long time warning the world about climate change, but they nonetheless tend to sound a more optimistic note than degrowthers like Hickel. “It’s undoubtedly a monumental challenge,” Mann told me. “We have the technology to solve the problem — renewable energy, smart grid technology, and existing energy storage. We just need the political will to act.”

Take solar panels. Two decades ago, cheap solar panels were just a dream. Now they’re everywhere and have become a crucial tool in the fight against climate change.

Not only that, solar panels have democratized electricity. Just one small-scale instance: In rural Kenya, you can see donkeys saddled with solar panels so that farmers can charge their phones. And there are many such examples that count as a win for both human progress and our fight against climate change.

It should go without saying that since rich governments got us into this climate mess, they should be at the forefront of getting us out of it. We need massive investments in carbon capture, green energy, plant-based meat, mitigation, and straight-up cash transfers to poor countries disproportionately affected by the climate crisis.

Many of the researchers I spoke to were open to the idea that in the long run, humanity would need to rethink many of our cherished assumptions about how economies work, in order to build a civilization that can flourish for thousands or millions of years. They didn’t reject degrowth as a philosophical contribution to the question of what future human civilizations should care about.

But such articulations of different philosophies of human flourishing should not be mistaken for public policy.

We don’t have very long, and we need to decarbonize quickly. We have technologies that have made a big difference already, and they must be made available on an unprecedented scale. We have more speculative solutions, technological and societal, and we should be prepared to try those, too. The scale of the problem is such that we need to act now — and we need to be clear-eyed about which ideas truly move the needle.

### Regulation CP---2AC

#### Perm---do both.

Dr. Pedro Caro de Sousa 21, Advisor at the EUI Florence School of Regulation, Competition Expert with the OECD, DPhil from the University of Oxford, “Competition Enforcement and Regulatory Alternatives”, OECD, 6/7/2021, https://www.oecd.org/daf/competition/competition-enforcement-and-regulatory-alternatives-2021.pdf

Another view is that competition law and regulation are complements. Well-functioning markets can often best be achieved by the combination of timely, targeted competition enforcement and ex ante regulation that draws on a breadth of market experience (Coscelli, 2018[31]).

Complementary roles for economic regulation and competition law arise mainly in two instances: where the sectoral law and competition law have the same goal, i.e. the promotion of competition; or where sectoral regulations have goals broader than the promotion of competition that are nevertheless consistent with competition law (ICN, 2004, pp. 4-8[32]).10 In these circumstances, competition and regulation are not mutually exclusive. They operate in the same sphere of economic activity, address the same problems, and the use of one mechanism does not preclude the application of the other (Dunne, 2015, p. 56[5]).

There are numerous examples of how competition enforcement can complement sector-regulation. In regulated sectors, the sector regulator has sometimes been considered the ex ante controller of market power, via price, revenue and investment oversight, while the competition authority is considered the ex post controller of market power, via abuse of dominance and cartel enforcement (OECD, 2019, p. 7[11]). Competition law can help ensure that the regulatory regime achieves its economic goals, particularly those related to economic welfare; make markets perform more competitively, given the regulatory regime that happens to control them; and scrutinise private conduct that is not effectively reviewed or controlled by the regulatory regime (Hovenkamp, 2020, p. 899[33]).

#### Tech regs destroy clarity and get circumvented.

Steven Semeraro 02, Associate Dean & Associate Professor of Law at the Thomas Jefferson School of Law, “Regulating Information Platforms: The Convergence to Antitrust”, Telecommunications & High Technology Law, Volume 1, p. 178-180

IV. INDUSTRY-SPECIFIC REGULATION

Industry-specific regulation is believed to be needed where cooperation among competitors is necessary in order to maximize consumer welfare and where the public interest demands consideration of goals other than short-run consumer welfare. Antitrust is generally thought to be incapable of achieving these results because it rarely imposes duties to cooperate.121 As explained in Section I, however, antitrust has proven quite adept at requiring cooperation when it is really essential.122 And Sections II and III explained how antitrust may incorporate long-run consumer welfare and free speech values. There is thus no inherent need for specifically tailored legislative pronouncements when the general body of antitrust law is seen as flexible enough to reach all threats to consumer welfare.

Nevertheless, industry-specific consumer-welfare regulation arguably could provide substantial benefits by clearly identifying ex ante the rights and obligations of the competitors in a way that the general antitrust laws cannot. But that theoretical benefit is unlikely to be realized. Congress has demonstrated a singular inability, or at least an unwillingness, to draft regulatory legislation that is clear enough to obtain this benefit. As Justice Scalia wrote in his opinion for the Court in Iowa Utilities:

It would be a gross understatement to say that the 1996 [Telecommunications] Act is not a model of clarity. It is in many important respects a model of ambiguity or indeed even self contradiction. That is most unfortunate for a piece of legislation that profoundly affects a crucial segment of the economy worth tens of billions of dollars.123

In the absence of industry-specific regulation, litigation would often be necessary to resolve particular disputes. Given the inherent uncertainties in the antitrust laws, the notion that private parties could often settle differences in the shadow of those laws is unlikely.124 But industry specific regulation may be no better. The 1996 Telecommunications Act produced an explosion of litigation that remains unresolved five years later.125

Even when industry-specific regulation is interpreted in a way that provides clear rules to govern competitive behavior in information platform markets, the antitrust laws may remain a substantively better regulatory device. By their nature, industry- specific rules intended to enhance consumer welfare would necessarily require both (a) costly conduct to conform to the rules that in some situations would have no measurable consumer welfare benefit, and (b) permit some conduct that reduced consumer welfare but did not violate an ex ante rule.126 The problem would likely worsen over time as firms learned to walk the line along the rule, figuring out ways to comply with the letter of the law without providing the intended consumer welfare benefits. 127 For example, firms may learn the maximum permissible delays in the implementation of a rule-required behavior. All this is not to say that clear rules are never useful. But the resistance to using clear rules in antitrust doctrine generally should lead us to think twice before assuming that industry-specific legislation is a superior alternative to antitrust as a regulator of competition among information platforms.

#### 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

### AT: Data Sharing

#### Data sharing mandate fails.

Mark MacCarthy 18, Senior Fellow and Adjunct Faculty Member in the Communication, Culture, and Technology Program at Georgetown University, M.A. in Economics from Notre Dame University, “Data sharing: a problematic idea in search of a problem to solve,” CIO, 08-30-2018, https://www.cio.com/article/3301175/data-sharing-a-problematic-idea-in-search-of-a-problem-to-solve.html

The latest data sharing proposal comes from Prof. Myer-Schonberger, whose previous work on big data and the right to delete information won him a wide following in policy circles. The key idea is that companies above a certain size would be required to disgorge subsets of their data to competitors. Amazon, for example, would provide the world with its sales data so that anyone could create an alternative recommendation engine.

Voluntary data sharing arrangements among competitors have existed for generations. The most prominent example in the U.S. is credit bureaus, where banks and others voluntarily pool information in order to get a more accurate picture of risks for potential lenders, insurers and employers.

But in its proposed universal and mandatory form, data sharing suffers from many flaws, not just detailed implementation difficulties that could be expected to arise with even promising new ideas, but fundamental defects that make it unattractive in principle and unworkable in practice.

Data sharing is a privacy nightmare

If people are willing to share their information with Google or Facebook, it doesn’t follow that they want to share it with all the competitors of these companies. Forced data sharing runs against any notion of effective privacy protection. Companies with attractive and desirable data management practices would be required to pass personal information on to other companies with no established consumer protection processes.

This could all be fixed if companies were required to deidentify the information before passing it on. But of course, identified information is the point. New social networks don’t want anonymous data; they want the list of Facebook’s users and everything Facebook knows about them. Google’s competitors don’t want random search data; they want individual level data, identified by IP address, device ID and other identifiers that privacy regulators treat as personal information. Amazon competitors don’t want aggregated sales data; they want Amazon’s individual level profiles to train their recommendation engines.

Data sharing would also create overwhelming disincentives to invest in data base construction

The non-rivalrous nature of information often gives rise to the feeling that there is no loss and all gain from data sharing. Let’s all use it together because it cannot be used up!

But free to use does not mean free to produce. Information does not reside in a Platonic heaven. It exists embodied in tangible computer records. The construction and maintenance of accurate, up to date relevant systems of records is an enormously expensive tasks characterized by steep economies of scale. These data bases are often a treasured company asset, with values at transfer in the billions of dollars. It is hard to see why any company would invest in this effort if the fruit of its work would be immediately made available to all competitors at no or minimal charge.

The data sharing idea would override private contracts and the European data base directive that provide investors with incentives to create and maintain valuable data bases.

The alleged dangers of “centralization” and “central planning” are illusory.

Of course, antitrust law does not demand that companies with large market shares must be subject to special requirements such as IP or data sharing until other companies are more successful.

Still, data sharing might be a conceivable response if new companies could not gain access to the information they need to compete fully against incumbents. Yet every time regulators have looked at this issue in merger contexts they have determined that there is enough data post-merger to allow full and effective competition from alternative providers.

Myer-Schonberger thinks data sharing is needed to ward off system failures that could arise from centralization. When one company provides the best recommendation engine that most people want to use, what happens when the service makes a mistake? There’s nowhere to go to get an alternative answer that could correct the mistake. The result could be catastrophically misleading search results, consumer recommendations, and news feeds. When one company controls all the data, what happens if there’s a security breach? It’s a single point of failure that could have catastrophic results for the entire system.

But upon examination these ideas are mostly scary rhetoric. Forced data sharing doesn’t make the data vanish from the original data collector. So whatever security risks were present are still there. And with data sharing, every new entity who receives the original data is a new point of failure.

If a company gets its personalized results wrong, consumers don’t need to go to a competitor to be informed of the mistake. It’s like getting the wrong sized shoe; you know it doesn’t fit because it hurts. So, what happens with personalization mistakes? You don’t read the suggested article, you don’t buy the recommended product and you don’t click on the proffered search results. And the algorithm learns from that and tries to get it better next time.

If it doesn’t, then there are alternatives. Perhaps the biggest blind spot in the centralization argument is the idea that Amazon doesn’t have competitors like Wal-Mart, Facebook doesn’t have competitors like Snapchat, Twitter and LinkedIn, and Google doesn’t have competitors like Bing and DuckDuckGo, not to mention Yelp and Travelocity. Systematic, regular and widespread failure of these services would not be catastrophic except for the companies themselves, who would immediately see their market share eroded as people exit in mass to these alternatives.

Reformers should look elsewhere for practical remedies

There’s a widespread feeling that something is amiss in tech and many policy analysts are in search of remedies that will improve the status quo. In my view, mandated data sharing is an idea in search of a problem to solve. But even those who think the current tech marketplace needs a good dose of reform would be well advised to look elsewhere for practical, workable alternatives.

### AT: DPA

#### Expert agencies are worse than antitrust courts---every metric goes aff

Joshua D. Wright 13, Professor at George Mason University School of Law and Department of Economics, and Angela M. Diveley, Associate at Freshfields Bruckhaus Deringer in Washington, DC, “Do expert agencies outperform generalist judges? Some preliminary evidence from the Federal Trade Commission”, 4/1/13, Lexis

Conclusions

Expertise has long been the touchstone of administrative agency performance. In the context of antitrust agencies, like others, the expert inputs are translated into outputs including adjudicatory decisions, rulemaking, consents, advocacy, and amicus briefs. An often overlooked aspect of understanding agency performance and its relationship to expertise is institutional design. The so-called expertise hypothesis posits that the institution with more expert inputs will consistently produce higher quality outputs. That assumption suffers from the Nirvana Fallacy as it lacks a basis without an analysis of the institutions and processes translating those inputs to outputs. Inability of an agency to translate its expertise into high-quality decision-making renders it at best ineffective and at worst costly to society, and institutional design has the potential to hinder the flow of information from an agency’s staff to its decision-makers.

In the context of US antitrust law, many commentators have recently called for an expansion of the FTC’s adjudicatory decision-making authority pursuant to Section 5 of the FTC Act, increased Commission rulemaking, and carving out exceptions for the agency from increased burdens of production facing private plaintiffs. These claims are often expressly grounded in the expertise hypothesis. The relevant question is whether the expert inputs available to generalist federal district court judges through expert evidence, amicus briefs, and economic training, among other sources of such expertise, translate to higher quality outputs and better performance than produced by the Commission in its role as an adjudicatory decision-maker.

Many appear to assume that agencies have courts beat on this margin. To our knowledge, while oft-cited as a reason to increase the discretion of agencies and the deference afforded them by reviewing courts, no one has provided empirical support for this claim. We seek to fill that gap, and contrary to the expertise hypothesis, we find the evidence suggests the Commission does not perform as well as generalist judges in its adjudicatory antitrust decision-making role. Furthermore, while the available evidence is more limited, there is no clear evidence the Commission adds significant incremental value to the ALJ decisions it reviews. In light of these findings, there is little empirical basis for the various proposals to expand agency authority and deference to agency decisions. More generally, our results highlight the need for research on the relationship between institutional design and agency expertise in the antitrust context.

### States CP---2AC

#### Gets struck down via the DCC, CC, AND Supremacy Clause.

Daniel A. Lyons 19, Professor at Boston College Law School, “State Net Neutrality”, Summer 2019, 80 U. Pitt. L. Rev. 905, Lexis

D. Dormant Commerce Clause

Independent of the Communications Act, state regulation of the Internet may also run afoul of the Dormant Commerce Clause. The Dormant Commerce Clause doctrine prevents states from imposing undue burdens on interstate commerce. It is a judge-made doctrine, derived from the negative implication of the Constitution's grant to Congress of the power to regulate commerce between the states. 245 Its "central rationale . . . is to prohibit state or municipal laws whose object is local economic protectionism." 246 Thus, state laws that explicitly discriminate against [\*941] interstate commerce face "a virtually per se rule of invalidity." 247 But even a facially nondiscriminatory state law may nonetheless run afoul of the doctrine if it unduly burdens interstate commerce. Courts evaluate such claims under the test announced in Pike v. Bruce Church: "Where the statute regulates even-handedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits." 248

The Pike balancing test played an important role in shaping early Internet regulation, because of concern about spillover effects when states regulate online conduct. In the prominent case of American Library Association v. Pataki, a district court struck down a New York law that prohibited the intentional use of the Internet to send pornographic messages that would be "harmful to minors." 249 The court conceded that shielding New York minors from pornography constituted a legitimate state interest. 250 But it found this interest was outweighed by the significant chilling effect the law would have on wholly out-of-state conduct. 251 Because information posted to the Internet is available everywhere simultaneously, those who disseminate information online could face liability for posting content that arguably ran afoul of New York's law, even if they had no intention of communicating with New York residents. 252 this, in turn, would chill communication to recipients in states where the content was legal, thus imposing an undue burden on interstate commerce far in excess of what little local benefits were likely to result from enforcement. 253

Like many balancing tests, the doctrine is somewhat unpredictable, turning on the facts of individual cases. Many state regulations create spillover effects; the Dormant Commerce Clause only invalidates those that, in the court's judgment, impose a greater burden on interstate commerce than they reap in local benefit--which can differ from case to case. For example, in National Federation of the Blind [\*942] v. Target Corp., 254 Target argued that California's disability law burdened interstate commerce by requiring it to modify a nationwide website to meet California requirements--which effectively imposed California law on the company's transactions with all customers, even those outside California. 255 The court found this argument was premature at the motion to dismiss stage, explaining that Target could develop a California-specific website, and even if it chose not to do so, its decision to develop one product for a nationwide market does not necessarily implicate the Commerce Clause. 256 At a minimum, factual development was necessary to determine the "practical effect" of the law on interstate commerce before the court could decide the Dormant Commerce Clause issue. 257

National Federation of the Blind's focus on practical effects reflects the insights of Professors Jack Goldsmith and Alan Sykes, whose seminal Yale Law Journal article, The Internet and the Dormant Commerce Clause, brought some clarity to this somewhat confusing corner of the law. 258 Goldsmith and Sykes highlight that the primary justification for the Dormant Commerce Clause is to "ensure[] free trade among the states and thereby secure[] the associated economic benefits." 259 They thus support the consideration of economic efficiency as the lodestar for such claims: "[T]he appropriate statement of the extraterritoriality concern is that states may not impose burdens on out-of-state actors that outweigh the in-state benefits." 260

A full application to broadband regulation is beyond the scope of this article. But it is worth noting that like early state attempts to regulate online conduct, state-level network traffic management regulations are susceptible to a Dormant Commerce Clause challenge. The Internet is a national (indeed, global) network, meaning that attempts to regulate the flow of traffic on that network are likely to have extraterritorial effects. If state net neutrality rules survive a preemption analysis, states should be ready for the claim that such regulations unreasonably burden [\*943] interstate commerce and, therefore, contravene the Dormant Commerce Clause doctrine.

#### The FTC, DOJ, AND the federal government are key to effective signaling AND coordination.

Dr. Heath P. Tarbert 21, JD and JSD from University of Pennsylvania Law School, Master of Studies and Doctor of Philosophy in Comparative Law from Oxford University, “Self-Regulation in the Derivatives Markets: Stability Through Collaboration”, Northwestern Journal of International Law & Business, 41 NW J. Int'l L. & Bus. 175, Winter 2021, Lexis

2. International Harmonization

Another area where government action is necessary relates to international harmonization. While SROs are often adept at formulating cross-border principles and standards with other SROs, 150 the government--and particularly a federal agency--is critical to advancing harmonized regulatory systems with foreign governmental counterparts. An example is the recent harmonization of certain swap data reporting efforts. In proposing and finalizing a new system for data reporting by swap dealers and swap data repositories, the CFTC has worked to harmonize its framework with that of the European Securities and Markets Authority (ESMA). 151 As data is inherently borderless and because swap dealers and swap data repositories often must report data to both the CFTC and ESMA, harmonizing reporting requirements where appropriate can produce significant cost savings and efficiencies for market participants.

For example, the CFTC's efforts to bring its swap data reporting system into greater harmony with international coordination efforts has led to the publication of a CFTC Technical Specification, which contains 128 reportable data fields. 152 The Technical Specification streamlines hundreds of prior fields that were previously required by swap data repositories operating without clear CFTC guidance. This change will enable the CFTC to receive the data it needs to perform its regulatory functions while at the same time reducing duplicative reporting burdens for entities subject to [\*203] multiple jurisdictions. In proposing revisions to the swap data reporting rules, the Chairman of the CFTC stated:

As it stands today, a market participant with a swap reportable to the CFTC might also have to report the same swap to the SEC, the European Securities and Markets Authority (ESMA), and perhaps other regulators as well. The global nature of our derivatives markets has led to the preparation and submission of multiple swap data reports, creating a byzantine maze of disparate data fields and reporting timetables. Market participants should not incur the costs and burdens of reporting a grab-bag of dissimilar data for the very same swap. That approach helps neither the market nor the CFTC: conflicting data reporting requirements make regulatory coordination more difficult, preventing a panoramic view of risk. 153

Resolving situations like this requires significant federal action to coordinate with and align regulatory requirements and technical standards with foreign regulators. 154 While SROs can be very effective at constructing international standards, they lack the ability to place the imprimatur of the United States government, as a sovereign nation, on negotiations and regulatory efforts. In contrast, CFTC action in the swap data reporting context has given assurances to other regulators that harmonization efforts have the backing of the United States government. This is important not only for the mechanics of promulgating rules, but also for international comity: federal support for collaborative efforts sends a strong signal to foreign governmental counterparts that can lay the groundwork for future cooperation.

Signaling aside, there is a practical reason to prefer government action in the international harmonization space. Just as states and localities do not negotiate treaties, 155 leaving regulatory harmonization efforts primarily to federal agencies is important to produce a unified and holistic message. The numerous exchanges in the derivatives space--each an SRO in its own right--have varying interests and priorities that could complicate efforts to place them in charge of harmonization efforts with overseas regulators. The ability of the CFTC to speak with one voice on behalf of the U.S. derivatives markets when negotiating and collaborating with foreign regulators is a clear benefit of federal action in the international space.

### FTC Tradeoff DA---2AC

#### No resources AND thumpers

Michael Kades 21, Director of Markets and Competition Policy, former attorney at the Federal Trade Commission; Equitable Growth Foundation, “Competitive Edge: Congress Needs to Restore the Federal Trade Commission’s Authority to Seek Monetary Remedies When Companies Break The Law,” 7/28/2021, <https://equitablegrowth.org/competitive-edge-congress-needs-to-restore-the-federal-trade-commissions-authority-to-seek-monetary-remedies-when-companies-break-the-law/>

As the report explains, “Rather than deter anticompetitive behavior, current legal standards do the opposite: They encourage it because such conduct is likely to escape condemnation, and the benefits of violating the law far exceed the potential penalties.” In the face of such warnings, it is a particularly bad time for the Supreme Court to unanimously reject 40 years of lower court rulings and conclude that the Federal Trade Commission can neither force companies to give up the profits they earned by violating the law nor compensate the victims of those violations. (The first remedy is called disgorgement, and the second remedy is called restitution.)

Whether the Supreme Court in April correctly interpreted the statute at issue in the case, AMG Capital Management LLC v. Federal Trade Commission, is less important than its implications. Professor [Andy Gavil discusses a potential silver lining](https://equitablegrowth.org/competitive-edge-the-silver-lining-for-antitrust-enforcement-in-the-supreme-courts-embrace-of-textualism/) in the Supreme Court’s decision—the glass-half-full approach. He argues that if the Supreme Court faithfully applies its approach to statutory interpretation, then it could open the door to broader application of the antitrust laws.

I look at the direct impact of the decision—the glass-half-empty approach. I argue that the decision deprives the antitrust agency of a critical, albeit imperfect, weapon that has deterred anticompetitive conduct particularly in the pharmaceutical industry. Although it has used disgorgement in competition cases sparingly, those awards have deterred the entire industry from engaging in the challenged conduct.

Before the recent Supreme Court decision, the disgorgement awards in competition cases went far beyond the impact in a single case. The savings include benefits from the conduct that did not occur. If the commission cannot seek monetary remedies, then companies will keep the rewards of their illegal conduct. Perversely, the companies causing the greatest harm will benefit the most from April’s decision.

The impact reaches even further. Without the threat of a disgorgement award, companies are more likely to drag out litigation and tax the FTC’s limited resources. Because the commission will spend more resources on egregious cases to reach weaker results, it will have fewer resources to challenge anticompetitive conduct in other areas and, for example, could affect enforcement in merger cases or in the high-tech industry.

#### No spillover between parts of the FTC

Spencer Weber Waller 5, Professor of Law and Director of the Institute for Consumer Antitrust Studies at the Loyola University Chicago School of Law, “In Search of Economic Justice: Considering Competition and Consumer Protection Law”, Loyola University Chicago Law Journal, 36 Loy. U. Chi. L.J. 631, Winter 2005, Lexis

Despite this more comprehensive mission, the FTC is organized in a way that tends to emphasize the separation of these fields, rather than the common elements of the agency's mission. The FTC has a Bureau of Competition and a separate Bureau of Consumer Protection, with a Bureau of Economics to support the work of both endeavors. The Bureau of Competition ("BC") primarily engages in the investigation and enforcement of mergers and complex civil antitrust cases with a recent emphasis on intellectual property and health care issues. The Bureau of Consumer Protection ("BCP") primarily investigates and challenges outright fraudulent conduct. 9 The FTC website details recent BCP activity involving Internet sales, telemarketing, false health and fitness claims, identity theft and similar issues. 10 These are all very different issues from the day-to-day focus of the competition staff. This basic split is further mirrored in the Bureau of Economics ("BE"), where the staff tends to specialize in either competition or consumer protection. Any crossover of staff and cooperation occurs primarily in competition advocacy before legislatures or regulatory agencies, and not in case selection and investigation.

#### Other entities fill-in

Alison Jones 20, Professor at King’s College London, & William E. Kovacic, Global Competition Professor of Law and Policy, The George Washington University Law School, “Antitrust’s Implementation Blind Side: Challenges to Major Expansion of U.S. Competition Policy,” The Antitrust Bulletin, Volume 65, Number 2, SAGE Publications Inc, 06/01/2020, pp. 227–255

C. Improving Capability: Agency Cooperation and Project Selection

The U.S. antitrust system is famous for its decentralization of the power to prosecute, giving many entities – public agencies (at both the federal and state levels), consumers, and businesses – competence to enforce the federal antitrust laws. The federal enforcement regime also coexists with state antitrust laws and with sectoral regulation, at the national and state levels, that include competition policy mandates.

The extraordinary decentralization and multiplicity of enforcement mechanisms supply valuable possibilities for experimentation and provide safeguards in case any single enforcement agent is ~~disabled~~ [hamstringed](e.g., due to capture, resource austerity, or corruption).75 Among public agencies, there is also the possibility that federal and state government institutions, while preserving the benefits of experimentation and redundancy, could improve performance through cooperation that allows them to perform tasks collectively that each could accomplish with great difficulty, or not at all, if they act in isolation. In the discussion below, we suggest approaches that preserve the multiplicity of actors in the existing U.S. regime but also promise to improve the performance of the entire system through better inter-agency cooperation – to integrate operations more fully “by contract” rather than a formal consolidation of functions in a smaller number of institutions.

### AT: AI Impact

#### AI Impact is wrong

Stephen Pinker 18, professor of psychology at Harvard, “Enlightenment Now: The Case for Reason, Science, Humanism, and Progress”

Prominent among the existential risks that supposedly threaten the future of humanity is a 21st-century version of the Y2K bug. This is the danger that we will be subjugated, intentionally or accidentally, by artificial intelligence (AI), a disaster sometimes called the Robopocalypse and commonly illustrated with stills from the Terminator movies. As with Y2K, some smart people take it seriously. Elon Musk, whose company makes artificially intelligent self-driving cars, called the technology “more dangerous than nukes.” Stephen Hawking, speaking through his artificially intelligent synthesizer, warned that it could “spell the end of the human race.”19 But among the smart people who aren’t losing sleep are most experts in artificial intelligence and most experts in human intelligence. The Robopocalypse is based on a muzzy conception of intelligence that owes more to the Great Chain of Being and a Nietzschean will to power than to a modern scientific understanding.21 In this conception, intelligence is an all-powerful, wish-granting potion that agents possess in different amounts. Humans have more of it than animals, and an artificially intelligent computer or robot of the future (“an AI,” in the new count-noun usage) will have more of it than humans. Since we humans have used our moderate endowment to domesticate or exterminate less well-endowed animals (and since technologically advanced societies have enslaved or annihilated technologically primitive ones), it follows that a supersmart AI would do the same to us. Since an AI will think millions of times faster than we do, and use its superintelligence to recursively improve its superintelligence (a scenario sometimes called “foom,” after the comic-book sound effect), from the instant it is turned on we will be powerless to stop it.22 But the scenario makes about as much sense as the worry that since jet planes have surpassed the flying ability of eagles, someday they will swoop out of the sky and seize our cattle. The first fallacy is a confusion of intelligence with motivation—of beliefs with desires, inferences with goals, thinking with wanting. Even if we did invent superhumanly intelligent robots, why would they want to enslave their masters or take over the world? Intelligence is the ability to deploy novel means to attain a goal. But the goals are extraneous to the intelligence: being smart is not the same as wanting something. It just so happens that the intelligence in one system, Homo sapiens, is a product of Darwinian natural selection, an inherently competitive process. In the brains of that species, reasoning comes bundled (to varying degrees in different specimens) with goals such as dominating rivals and amassing resources. But it’s a mistake to confuse a circuit in the limbic brain of a certain species of primate with the very nature of intelligence. An artificially intelligent system that was designed rather than evolved could just as easily think like shmoos, the blobby altruists in Al Capp’s comic strip Li’l Abner, who deploy their considerable ingenuity to barbecue themselves for the benefit of human eaters. There is no law of complex systems that says that intelligent agents must turn into ruthless conquistadors. Indeed, we know of one highly advanced form of intelligence that evolved without this defect. They’re called women. The second fallacy is to think of intelligence as a boundless continuum of potency, a miraculous elixir with the power to solve any problem, attain any goal.23 The fallacy leads to nonsensical questions like when an AI will “exceed human-level intelligence,” and to the image of an ultimate “Artificial General Intelligence” (AGI) with God-like omniscience and omnipotence. Intelligence is a contraption of gadgets: software modules that acquire, or are programmed with, knowledge of how to pursue various goals in various domains.24 People are equipped to find food, win friends and influence people, charm prospective mates, bring up children, move around in the world, and pursue other human obsessions and pastimes. Computers may be programmed to take on some of these problems (like recognizing faces), not to bother with others (like charming mates), and to take on still other problems that humans can’t solve (like simulating the climate or sorting millions of accounting records). The problems are different, and the kinds of knowledge needed to solve them are different. Unlike Laplace’s demon, the mythical being that knows the location and momentum of every particle in the universe and feeds them into equations for physical laws to calculate the state of everything at any time in the future, a real-life knower has to acquire information about the messy world of objects and people by engaging with it one domain at a time. Understanding does not obey Moore’s Law: knowledge is acquired by formulating explanations and testing them against reality, not by running an algorithm faster and faster.25 Devouring the information on the Internet will not confer omniscience either: big data is still finite data, and the universe of knowledge is infinite. For these reasons, many AI researchers are annoyed by the latest round of hype (the perennial bane of AI) which has misled observers into thinking that Artificial General Intelligence is just around the corner.26 As far as I know, there are no projects to build an AGI, not just because it would be commercially dubious but because the concept is barely coherent. The 2010s have, to be sure, brought us systems that can drive cars, caption photographs, recognize speech, and beat humans at Jeopardy!, Go, and Atari computer games. But the advances have not come from a better understanding of the workings of intelligence but from the brute-force power of faster chips and bigger data, which allow the programs to be trained on millions of examples and generalize to similar new ones. Each system is an idiot savant, with little ability to leap to problems it was not set up to solve, and a brittle mastery of those it was. A photo-captioning program labels an impending plane crash “An airplane is parked on the tarmac”; a game-playing program is flummoxed by the slightest change in the scoring rules.27 Though the programs will surely get better, there are no signs of foom. Nor have any of these programs made a move toward taking over the lab or enslaving their programmers. Even if an AGI tried to exercise a will to power, without the cooperation of humans it would remain an impotent brain in a vat. The computer scientist Ramez Naam deflates the bubbles surrounding foom, a technological Singularity, and exponential self-improvement: Imagine that you are a superintelligent AI running on some sort of microprocessor (or perhaps, millions of such microprocessors). In an instant, you come up with a design for an even faster, more powerful microprocessor you can run on. Now . . . drat! You have to actually manufacture those microprocessors. And those fabs [fabrication plants] take tremendous energy, they take the input of materials imported from all around the world, they take highly controlled internal environments which require airlocks, filters, and all sorts of specialized equipment to maintain, and so on. All of this takes time and energy to acquire, transport, integrate, build housing for, build power plants for, test, and manufacture. The real world has gotten in the way of your upward spiral of self-transcendence.28 The real world gets in the way of many digital apocalypses. When HAL gets uppity, Dave disables it with a screwdriver, leaving it pathetically singing “A Bicycle Built for Two” to itself. Of course, one can always imagine a Doomsday Computer that is malevolent, universally empowered, always on, and tamperproof. The way to deal with this threat is straightforward: don’t build one. As the prospect of evil robots started to seem too kitschy to take seriously, a new digital apocalypse was spotted by the existential guardians. This storyline is based not on Frankenstein or the Golem but on the Genie granting us three wishes, the third of which is needed to undo the first two, and on King Midas ruing his ability to turn everything he touched into gold, including his food and his family. The danger, sometimes called the Value Alignment Problem, is that we might give an AI a goal and then helplessly stand by as it relentlessly and literal-mindedly implemented its interpretation of that goal, the rest of our interests be damned. If we gave an AI the goal of maintaining the water level behind a dam, it might flood a town, not caring about the people who drowned. If we gave it the goal of making paper clips, it might turn all the matter in the reachable universe into paper clips, including our possessions and bodies. If we asked it to maximize human happiness, it might implant us all with intravenous dopamine drips, or rewire our brains so we were happiest sitting in jars, or, if it had been trained on the concept of happiness with pictures of smiling faces, tile the galaxy with trillions of nanoscopic pictures of smiley-faces.29 I am not making these up. These are the scenarios that supposedly illustrate the existential threat to the human species of advanced artificial intelligence. They are, fortunately, self-refuting.30 They depend on the premises that (1) humans are so gifted that they can design an omniscient and omnipotent AI, yet so moronic that they would give it control of the universe without testing how it works, and (2) the AI would be so brilliant that it could figure out how to transmute elements and rewire brains, yet so imbecilic that it would wreak havoc based on elementary blunders of misunderstanding. The ability to choose an action that best satisfies conflicting goals is not an add-on to intelligence that engineers might slap themselves in the forehead for forgetting to install; it is intelligence. So is the ability to interpret the intentions of a language user in context. Only in a television comedy like Get Smart does a robot respond to “Grab the waiter” by hefting the maître d’ over his head, or “Kill the light” by pulling out a pistol and shooting it. When we put aside fantasies like foom, digital megalomania, instant omniscience, and perfect control of every molecule in the universe, artificial intelligence is like any other technology. It is developed incrementally, designed to satisfy multiple conditions, tested before it is implemented, and constantly tweaked for efficacy and safety (chapter 12). As the AI expert Stuart Russell puts it, “No one in civil engineering talks about ‘building bridges that don’t fall down.’ They just call it ‘building bridges.’” Likewise, he notes, AI that is beneficial rather than dangerous is simply AI.

### Infrastructure DA---2AC

#### Infrastructure won’t pass.

Emily Cochrane 9-30, Washington and Congress Correspondent for the New York Times, “Congress Races to Avert a Government Shutdown, With Biden’s Agenda in the Balance”, New York Times, 9/30/2021, https://www.nytimes.com/2021/09/30/us/politics/government-shutdown-congress-infrastructure.html

But a planned vote in the House on a $1 trillion infrastructure bill is in doubt amid an intraparty stalemate. Liberal Democrats have threatened to bring down the infrastructure bill unless Congress first acts on a much larger, $3.5 trillion social policy package that includes a vast climate change initiative, expansions of health care, public education, paid leave and child care programs and an array of tax increases.

Both are major priorities for Mr. Biden, who invested ample political capital in the infrastructure compromise and has staked his presidency on enactment of a transformational social policy package.

But centrists have resisted the $3.5 trillion plan, and given Democrats’ slim margins of control, there is currently no clear path for passing it.

Despite repeated entreaties from Mr. Biden and top White House officials, two crucial Democratic holdouts — Senators Kyrsten Sinema of Arizona and Joe Manchin III of West Virginia — have refused to specify their bottom line in negotiations. White House officials had hoped to extract a firm public commitment from them this week to eventually vote for the social policy measure, but their efforts have so far proved unsuccessful.

Instead, Mr. Manchin doubled down on his opposition to the $3.5 trillion package in its current form, issuing a blistering statement late Wednesday in which he criticized the ambitions of the bill as the “definition of fiscal insanity.” He did not rule out supporting a slimmed-down version, suggesting he would be willing to reverse some elements of Republicans’ 2017 tax law and expand some social programs — but only if they were subject to income thresholds to ensure federal aid only went to those most in need.

#### No backlash---it has support from the public, Congress, media, and interest groups.

Robert Manduca 19, Assistant Professor, Sociology, University of Michigan, "Antitrust Enforcement as Federal Policy to Reduce Regional Economic Disparities," The ANNALS of the American Academy Political and Social Science, Vol. 685, Issue 1, 09/10/2019, SAGE.

Among possible federal regional development policies, reinvigorated antitrust enforcement stands out in several ways that make its establishment as a policy more likely. First, it is salient and familiar to voters. Most voters have encountered monopolies in their daily lives, whether they be airlines, utilities, internet providers, or tech platforms. Almost everyone has had a negative experience with a company too large or omnipresent to avoid in the future. Breaking such companies up offers a response to angry customers who would otherwise not have any way to express their frustration.

Moreover, aggressive antitrust enforcement has a long history in the United States, and it was widely practiced within the lifetimes of many voters. It has been a stated principle of capitalist economics since Adam Smith (Smith 1827), albeit one that has often been honored in the breach. In the United States specifically, antitrust enforcement fits with a longstanding American skepticism toward “bigness” (Lemann 2016; Rosen 2016). Perhaps for these reasons, the current antitrust movement has managed to find support among both liberals and conservatives. A poll conducted in September 2018, for instance, found that 65 percent of Americans—and 54 percent of Trump voters—think the government “should do more to break up corporate monopolies” (Dayen 2018). And leading proponents of antitrust enforcement in Congress and the media are found on both sides of the aisle (Crane 2018).

Perhaps more important than its broad appeal among voters, antitrust enforcement has the potential to attract support, or at least avoid opposition, from a wide range of organized interest groups. Of particular note is the potential for corporate ambivalence on this issue. Unlike many progressive economic policies, many companies—including quite powerful ones—stand to benefit from a reinvigorated antitrust regime. Yelp, for instance, has been a major critic of Google’s abuse of its search monopoly for several years (Dougherty 2017). When AT&T attempted to acquire T-Mobile in 2010, some of the most vocal opposition came from competitor Sprint (Singel 2011), though that did not stop Sprint from initiating its own bid for T-Mobile recently. Even Walmart, the largest retailer in the country, recently joined with other brick and mortar retailers to call on the Federal Trade Commission (FTC) to examine “persistent oligopolies in other parts of the retail system,” specifically singling out the market power of Amazon and Google (Dodge 2019). Companies like these could potentially become strong supporters of specific antitrust enforcement actions or a new antitrust movement in general.

### AT: Grid Impact

#### There are still tons of gaps

David Smith 21, Vice President of Business Planning & Performance at National Grid, “The Grid in the Infrastructure Package – What’s In, What’s Out, What’s Next”, GridForward, 8/19/21, https://gridforward.org/the-grid-in-the-infrastructure-package-whats-in-whats-out-whats-next/

What’s Not In The Package

Demand-Side Flexibility

Demand response and wider demand side management capabilities are essentially not funded in the bi-partisan package. One section encourages utility demand side management considerations, but no real funding goes to bringing demand side resources on the grid. With the potential of FERC 2222 to bring aggregated demand side and distributed resources into markets, much more widely available and adopted controllable devices, and other market developments necessitating the type of resource coming on the grid, this is a bit striking.

Building Automation

Support to ensure that buildings have higher level controls and capabilities to respond to grid signals was also not in the package. See comments in demand side and DER integration above and below.

Distributed Resource Integration

It’s not a future state, but a current need, in which aggregated edge resources can provide significant value to the grid. Turning distributed assets (solar, storage, EVs, thermostats, generators, hot water heaters, and much more) into a resource requires new technology, evolved models, new partnerships and more. Support to help this transition is essential. When well established values can be equitably dispersed to owners and all grid customers (and for the benefit of the system itself), we will have reached a new milestone in the evolution of our energy system – the grid has not reached this place yet and investing to get there is critical.

Analytics & Digital Infrastructure

<<MARKED>>

Real-time grid telemetry to better understand and optimize the dynamics of the system was essentially not in the package and is also not present in most parts of the grid. What’s the saying ‘you can’t manage what you don’t measure?’ Are there exciting things you can do with the roughly 70% of advanced meters that are now deployed? Absolutely! But additional investments are required to apply a suite of capabilities, largely powered by the cloud, to the grid and it’s time that we take them off the shelf and use them.

Renewable Energy

Remember that part of the grid that actually creates the energy we need to run our economy? There are a handful of minor areas of investment in targeted deployments and demonstrations here and there offering a few hundred million dollars. But this package does not help fund the build-out of clean energy resources, nor the grid capabilities to help facilitate it. Economics of resources like wind and solar in many jurisdictions are just so cost-effective that their additions have largely won out over recent years, but if we want a lower carbon society we have to dramatically expand renewable resources. And, importantly, we must build a grid that ensures affordable, reliable power gets to people and businesses when they need it. It seems that the reconciliation package may have central aspects to helping support the further build-out of clean energy resources, but if the IPCC report that came out this week didn’t wake you up to the needs I’m not sure what else may.

### Econ DA---2AC

#### Growth’s slowing AND future COVID shocks thump biz con

Howard Schneider 21, Reporter for Federal Reserve with Thomson Reuters, and Trevor Hunnicutt, Investment Reporter at Staff Writer at Reuters, “U.S. Economy's Hot Vax Summer Ends in Cool COVID Fall as Delta Rises”, Reuters, 9/3/2021, https://www.reuters.com/business/us-economys-hot-vax-summer-ends-cool-covid-fall-delta-rises-2021-09-03/

The promise of a "normal" U.S. economy this summer, which kicked off with the June revival of restaurants, air travel and baseball games, is transforming into an uncertain fall of rising health and economic risks.

Labor Day weekend, the traditional end of the U.S. summer season, was pegged as the moment when the economy would finally transition out of the pandemic slump, with private sector jobs and wages replacing unemployment benefits.

Instead, the summer is closing with rising COVID-19 case counts, hospitals bulging with patients, a sharp slowdown in jobs and dark predictions. Most startling - the University of Washington's Institute for Health Metrics and Evaluation projects that between now and Dec. 1 there will be 100,000 COVID deaths, more than in the same period last year, when a wave of winter infections took hold and vaccines were not yet available.

"I don't think fall 2021 is going to give us the catharsis we were waiting for," said Nick Bunker, economic research director for hiring site Indeed, or provide a clear view of how fast U.S. job markets can recover the 5.3 million jobs missing from before the pandemic. "The transition is going to be longer than expected. The issue is, is it a stumble or does the baton get dropped?"

Nonfarm payrolls increased by 235,000 jobs last month after surging 1.053 million in July, the Labor Department said Friday. Economists had expected 728,000 new jobs. read more

Special $300-per-week unemployment benefits end on Saturday. While employers hope that will usher new job applicants into a labor-starved market, there are signs the pandemic may have begun to curb their hiring plans instead. read more

The reopening of schools, far from smoothing the way for parents to return to full-time jobs, has been marked by erratic outbreaks, quarantines and closures, as school boards battle over masking students.

The manager at The Irish Whisper, a pub near the Gaylord National Resort and Convention Center in Oxon Hill, Maryland, said that business has fallen off since an initial summertime rush.

"It's not as great as pre-COVID, but it's better than not having anything," said the manager, who only gave his first name Andrew. "I thought we were in the clear and then this variant emerged."

After a strong start early this summer, attendance is dropping in baseball stadiums.

BIDEN'S VIRUS OVERSHADOWED

It is a particularly sensitive moment for U.S. President Joe Biden.

The Democratic president has taken a hit in the polls from the resurgent virus, faces criticism over the Afghanistan withdrawal and must deal with the aftermath of Hurricane Ida and a gauntlet of deadlines in Congress in coming weeks to keep the government funded and his economic agenda on track.

"There's a lot more work to do," to fix the U.S economy, Biden said Friday, addressing the weak jobs numbers. ""We need to make more progress in fighting the Delta variant," he said, repeating that it was a pandemic of the unvaccinated.

Biden's strategy of wiping out COVID by getting all of the United States vaccinated was hindered by a politically charged anti-vaccination movement this summer, and the pace of vaccinations has slowed since peaking in April.

A run of higher-than-expected inflation due to supply chain woes and labor shortages consumed what would otherwise have been healthy wage gains. A closely watched index of consumer confidence, which can influence spending, tumbled in August to a six-month low.

Progress on the virus "is (Biden's) No. 1 advantage, but people are discouraged and frustrated and it's also interacting with the economy," said one Biden adviser not authorized to speak on the record.

Administration officials believe the recovery largely remains on track, and infrastructure and spending plans may partly make up for the lapsed weekly unemployment insurance payments.

Democrats are hoping to finalize a $1 trillion bipartisan infrastructure bill as soon as this month while also working on a $3.5 trillion bill that could only secure party-line support.

"This bill is going to end years of gridlock," Biden said of the smaller infrastructure bill. "Both literally and figuratively it's going to change things," he said.

Republicans are fighting the administration's most ambitious spending plans. Goldman Sachs economists now estimate the "fiscal cliff," as spending rotates away from the record government transfers of the past 18 months, will be a noticeable drag on growth by late 2022.

Oxford Economics economists expect to trim their outlook for 2021 gross domestic product growth to 5.5%, down from 7% in early August.

The reduction reflects "the deteriorating health situation weighing on optimism and spending, lingering capital and labor supply constraints and a slower inventory rebuild," Oxford chief U.S. economist Gregory Daco said in an email.

DELTA WEIGHS ON HIRING

The August jobs data released Friday showed the current surge of infections, which drove the number of new cases from around 11,000 a day in mid-June to almost 150,000 daily this week, slowed hiring and the broader recovery.

"Today’s report has the Delta variant written all over it," Indeed's Bunker said. "It is clear that the recent surge in COVID-19 cases is a strong headwind to the labor market."

Economists are not expecting the sort of collapse in demand for restaurants, travel and other services seen in earlier virus waves. Many Federal Reserve officials feel businesses and families have learned to navigate the situation, either finding ways to lower the risk of infection as they resume work and business, or worrying less about infection because they're vaccinated.

The disappointing 235,000 in new jobs comes as the unemployment rate fell to 5.2% from 5.4% in July. It has, however, been understated by people misclassifying themselves as being "employed but absent from work."

Some employers argue that job growth figures could be much higher, given the record number of openings, if they had not had to compete with unemployment benefits. That hasn't been borne out in states that ended the federal benefits early over the summer, where there's little evidence more people went back to work.

Instead, employers seem to be pulling back on hiring themselves.

#### Congress can tailor it towards a particular area.

Harry First & Eleanor Fox 20, Charles L. Denison Professor of Law, New York University School of Law; Walter J. Derenberg Professor of Trade Regulation, New York University School of Law, "Big Tech and Antitrust – Calling Big Tech to Account under U.S. Law," House of Representatives Judiciary Committee, Antitrust Subcommittee, August 2020, pg. 11.

Second, we urge Congress to consider specific legislation that would simplify litigation in a way that would allow courts more easily to achieve the goals of the National Competition Policy. One important way to do that would be to specify evidentiary presumptions that would shift the burden of justification to defendants. Courts in antitrust cases have often used presumptions, but the courts today more often use them to defeat antitrust claims. Congress could, for example, require dominant firms to justify certain exclusionary conduct, or their giant mergers. Congress could also make rules special to certain types of acquisitions; for example, acquisitions of nascent competitors by industry leaders.

### AT: Economy Impact

#### Decline doesn’t cause war

Dr. Stephen M. Walt 20, Robert and Renée Belfer Professor of International Relations at Harvard University, PhD in International Relations (with Distinction) from Stanford University, MA in Political Science from the University of California, Berkeley, “Will a Global Depression Trigger Another World War?”, Foreign Policy, 5/13/2020, https://foreignpolicy.com/2020/05/13/coronavirus-pandemic-depression-economy-world-war/

On balance, however, I do not think that even the extraordinary economic conditions we are witnessing today are going to have much impact on the likelihood of war. Why? First of all, if depressions were a powerful cause of war, there would be a lot more of the latter. To take one example, the United States has suffered 40 or more recessions since the country was founded, yet it has fought perhaps 20 interstate wars, most of them unrelated to the state of the economy. To paraphrase the economist Paul Samuelson’s famous quip about the stock market, if recessions were a powerful cause of war, they would have predicted “nine out of the last five (or fewer).”

Second, states do not start wars unless they believe they will win a quick and relatively cheap victory. As John Mearsheimer showed in his classic book Conventional Deterrence, national leaders avoid war when they are convinced it will be long, bloody, costly, and uncertain. To choose war, political leaders have to convince themselves they can either win a quick, cheap, and decisive victory or achieve some limited objective at low cost. Europe went to war in 1914 with each side believing it would win a rapid and easy victory, and Nazi Germany developed the strategy of blitzkrieg in order to subdue its foes as quickly and cheaply as possible. Iraq attacked Iran in 1980 because Saddam believed the Islamic Republic was in disarray and would be easy to defeat, and George W. Bush invaded Iraq in 2003 convinced the war would be short, successful, and pay for itself.

The fact that each of these leaders miscalculated badly does not alter the main point: No matter what a country’s economic condition might be, its leaders will not go to war unless they think they can do so quickly, cheaply, and with a reasonable probability of success.

Third, and most important, the primary motivation for most wars is the desire for security, not economic gain. For this reason, the odds of war increase when states believe the long-term balance of power may be shifting against them, when they are convinced that adversaries are unalterably hostile and cannot be accommodated, and when they are confident they can reverse the unfavorable trends and establish a secure position if they act now. The historian A.J.P. Taylor once observed that “every war between Great Powers [between 1848 and 1918] … started as a preventive war, not as a war of conquest,” and that remains true of most wars fought since then.

The bottom line: Economic conditions (i.e., a depression) may affect the broader political environment in which decisions for war or peace are made, but they are only one factor among many and rarely the most significant. Even if the COVID-19 pandemic has large, lasting, and negative effects on the world economy—as seems quite likely—it is not likely to affect the probability of war very much, especially in the short term.

# 1AR

## Competition ADV

### Warming D---1AR

#### Warming won’t be catastrophic

Dr. Benjamin Zycher 21, Senior Fellow at the American Enterprise Institute, Doctorate in Economics from UCLA, Master in Public Policy from the University of California, Berkeley, and Bachelor of Arts in Political Science from UCLA, Former Senior Economist at the RAND Corporation, Former Adjunct Professor of Economics at the University of California, Los Angeles (UCLA) and at the California State University Channel Islands, and Former Senior Economist at the Jet Propulsion Laboratory, California Institute of Technology, “The Case for Climate Change Realism”, 6/21/2021, https://www.aei.org/articles/the-case-for-climate-change-realism/

Unable to demonstrate that observed climate trends are due to anthropogenic climate change — or even that these events are particularly unusual or concerning — climate catastrophists will often turn to dire predictions about prospective climate phenomena. The problem with such predictions is that they are almost always generated by climate models driven by highly complex sets of assumptions about which there is significant dispute. Worse, these models are notorious for failing to accurately predict already documented changes in climate. As climatologist Patrick Michaels of the Competitive Enterprise Institute notes:

During all periods from 10 years (2006-2015) to 65 (1951-2015) years in length, the observed temperature trend lies in the lower half of the collection of climate model simulations, and for several periods it lies very close (or even below) the 2.5th percentile of all the model runs. Over shorter periods, such as the last two decades, a plethora of mechanisms have been put forth to explain the observed/modeled divergence, but none do so completely and many of the explanations are inconsistent with each other.

Similarly, climatologist John Christy of the University of Alabama in Huntsville observes that almost all of the 102 climate models incorporated into the Coupled Model Intercomparison Project (CMIP) — a tracking effort conducted by the Lawrence Livermore National Laboratory — overstate past and current temperature trends by a factor of two to three, and at times even more. It seems axiomatic to say we should not rely on climate models that are unable to predict the past or the present to make predictions about the distant future.

The overall temperature trend is not the only parameter the models predict poorly. As an example, every CMIP climate model predicts that increases in atmospheric concentrations of greenhouse gas should create an enhanced heating effect in the mid-troposphere over the tropics — that is, at an altitude over the tropics of about 30,000-40,000 feet. The underlying climatology is simple: Most of the tropics is ocean, and as increases in greenhouse-gas concentrations warm the Earth slightly, there should be an increase in the evaporation of ocean water in this region. When the water vapor rises into the mid-troposphere, it condenses, releasing heat. And yet the satellites cannot find this heating effect — a reality suggesting that our understanding of climate and atmospheric phenomena is not as robust as many seem to assume.

The poor predictive record of mainstream climate models is exacerbated by the tendency of the IPCC and U.S. government agencies to assume highly unrealistic future increases in greenhouse-gas concentrations. The IPCC’s 2014 Fifth Assessment Report, for example, uses four alternative “representative concentration pathways” to outline scenarios of increased greenhouse-gas concentrations yielding anthropogenic warming. These scenarios are known as RCP2.6, RCP4.5, RCP6, and RCP8.5. Since 1950, the average annual increase in greenhouse-gas concentrations has been about 1.6 parts per million. The average annual increase from 1985 to 2019 was about 1.9 parts per million, and from 2000 to 2019, it was about 2.2 parts per million. The largest increase that occurred was about 3.4 parts per million in 2016. But the assumed average annual increases in greenhouse-gas concentrations through 2100 under the four RCPs are 1.1, 3.0, 5.5, and an astounding 11.9 parts per million, respectively.

The studies generating the most alarmist predictions are the IPCC’s Special Report on Global Warming of 1.5°C and the U.S. government’s Fourth National Climate Assessment, both of which were published in 2018. Both assume RCP8.5 as the scenario most relevant for policy planning. The average annual greenhouse-gas increase under RCP8.5 is over five times the annual average for 2000-2019 and almost four times the single biggest increase on record. Climatologist Judith Curry, formerly of the Georgia Institute of Technology, describes such a scenario as “borderline impossible.”

RCP6 is certainly more realistic. It predicts a temperature increase of 3 degrees Celsius by 2100 in the average of the CMIP models. But on average, those CMIP models overstate the documented temperature record by a factor of at least two. Ultimately, models with a poor record of successfully accounting for past data and highly unrealistic future greenhouse-gas concentrations should not be considered a reasonable basis for future policy formulation.

## Capitalism K

### AT: O/V

#### Nuclear war causes extinction.

Paul N. **Edwards 17**, CISAC’s William J. Perry Fellow in International Security at Stanford’s Freeman Spogli Institute for International Studies. Being Interviewed by EarthSky, “How Nuclear War Would Affect Earth’s Climate”, 9-8, [earthsky.org/human-world/how-nuclear-war-would-affect-earths-climate](http://earthsky.org/human-world/how-nuclear-war-would-affect-earths-climate)]

In the nuclear conversation, what are we not talking about that we should be?

We are **not talking enough** about the **climatic effects** of **nuclear war**.

The “nuclear winter” theory of the mid-1980s played a significant role in the arms reductions of that period. But with the collapse of the Soviet Union and the reduction of U.S. and Russian nuclear arsenals, this aspect of nuclear war has **faded from view**. That’s **not good**. In the mid-2000s, climate scientists such as Alan Robock (Rutgers) took **another look** at nuclear winter theory. This time around, they used much-**improved** and much more detailed **climate models** than those available 20 years earlier. They also tested the potential effects of smaller nuclear exchanges.

The result: an exchange involving just 50 nuclear weapons — the kind of thing we might see in an India-Pakistan war, for example — could loft 5 billion kilograms of smoke, soot and dust high into the stratosphere. That’s enough to cool the entire planet by about 2 degrees Fahrenheit (1.25 degrees Celsius) — about where we were during the Little Ice Age of the 17th century. Growing seasons could be shortened enough to create really significant food shortages. So the climatic effects of even a relatively small nuclear war would be planet-wide.

What about a larger-scale conflict?

A U.S.-**Russia** war currently seems unlikely, but if it were to occur, **hundreds** or even **thousands** of **nuclear weapons** might be launched. The **climatic consequences** would be **catastrophic**: global average temperatures would drop as much as 12 degrees Fahrenheit (7 degrees Celsius) for up to several years — temperatures last seen during the **great ice ages**. Meanwhile, smoke and dust circulating in the stratosphere would darken the atmosphere enough to **inhibit photosynthesis**, causing **disastrous crop failures**, widespread **famine** and **massive ecological disruption**.

The effect would be similar to that of the **giant meteor** believed to be responsible for the **extinction of the dinosaurs**. This time, **we would be the dinosaurs**.

Many people are concerned about North Korea’s advancing missile capabilities. Is nuclear war likely in your opinion?

At this writing, I think we are closer to a nuclear war than we have been since the early 1960s. In the North Korea case, both Kim Jong-un and President Trump are bullies inclined to escalate confrontations. President Trump lacks impulse control, and there are precious few checks on his ability to initiate a nuclear strike. We have to hope that our generals, both inside and outside the White House, can rein him in.

North Korea would most certainly “lose” a nuclear war with the United States. But many millions would die, including hundreds of thousands of Americans currently living in South Korea and Japan (probable North Korean targets). Such vast damage would be wrought in Korea, Japan and Pacific island territories (such as Guam) that any “victory” wouldn’t deserve the name. Not only would that region be left with horrible suffering amongst the survivors; it would also immediately face famine and rampant disease. Radioactive fallout from such a war would spread around the world, including to the U.S.

It has been more than 70 years since the last time a nuclear bomb was used in warfare. What would be the effects on the environment and on human health today?

To my knowledge, most of the changes in nuclear weapons technology since the 1950s have focused on making them smaller and lighter, and making delivery systems more accurate, rather than on changing their effects on the environment or on human health. So-called “battlefield” weapons with lower explosive yields are part of some arsenals now — but it’s **quite unlikely** that **any exchange** between two nuclear powers would **stay limited** to these smaller, **less destructive** bombs.

### Sustainable---1AR

#### Best study confirms it.

Hideo Noda & Shigeru Kano 21, Tokyo University of Science; The Shoko Chukin Bank, "Environmental Economic Modeling of Sustainable Growth and Consumption in a Zero-Emission Society," Journal of Cleaner Production, Vol. 299, 05/25/2021, pg. 1-2.

Manufacturing activities that pollute the soil, atmosphere, and water have adversely affected the environment. The abatement of pollution is therefore essential to maintaining environmental standards in the future. The purpose of this paper is to examine what kind of economic conditions should be satisfied if an economy adopts a rule stating that pollution must be cleaned up when it is produced, and whether the zero net emission of pollution flow (in the sense of a zero residual amount of pollution created minus pollution abated) is compatible with the continued growth of gross domestic product (GDP) and consumption when the economy experiences cyclical fluctuations.

A detailed understanding of the economic implications of cyclical fluctuations is crucial because actual economies inevitably undergo cycles of expansion and recession. In this respect, on the basis of the laboratory equipment model of Rivera-Batiz and Romer (1991), Matsuyama (1999) constructed a useful model that generates endogenous fluctuations. Notably, under specific conditions, an economy can perpetually oscillate between a capital-accumulation-based (no-innovation) growth phase and innovation-led growth phase. The former phase is called the Solow regime, after the work of Solow (1956), while the latter phase is called the Romer regime, after the work of Romer (1990) and Rivera-Batiz and Romer (1991).

However, Matsuyama (1999) did not pay attention to environmental aspects in a society. We therefore extend the model of Matsuyama (1999) by considering pollution abatement from the perspective of the kindergarten rule model of Brock and Taylor (2005). We thereby expect to obtain meaningful findings by analyzing endogenous fluctuations with pollution abatement, which has not been tackled in earlier studies. The term “kindergarten rule” originates from the title of a book written by Fulghum (1990) and implies that messes be cleaned up as they are created. Brock and Taylor (2005) referred to the proportion of pollution abatement expenditure in GDP for achieving zero net emissions of pollution (i.e., completely eliminating the amount of pollution created minus pollution abated) as the kindergarten rule level of abatement (or just the kindergarten rule).

Ono (2003) extended Matsuyama’s (1999) model to analyze endogenous fluctuations by accounting for environmental variables. Specifically, Ono (2003) incorporated the production structure of Matsuyama (1999) into the framework of the overlapping generations model on the basis of the work of John and Pecchenino (1994) and examined environmental taxation that maximizes the environmental quality and economic growth rate. It is found that there is a critical level of tax, and the economy achieves higher growth rates of GDP and environmental quality by raising (or reducing) tax if the initial tax is below (or above) the critical level. That is to say, the purpose of the present study differs from that of the study of Ono (2003). We analyze the feasibility of the positive growth of GDP with zero net emission that reflects the kindergarten rule of pollution abatement, while Ono (2003) focused on taxation for improving environmental quality and promoting economic growth. Recent efforts toward a zero-emission society, which are an important topic of the Paris Agreement that came into force on November 4, 2016, have received worldwide attention (see, for example, Pauli, 1997; Baumgartner and Zielowski, 2007; Tokimatsu et al., 2014). The present study is therefore of social importance and relevant. Additionally, we consider that the notion of environmental quality is vague and hence difficult to capture empirically. In contrast, the zero net emission of pollution has clear meaning.

Related studies of environment-growth models with endogenous fluctuations include those conducted by Zhang (1999), Chen and Li (2011), and Palivos and Varvarigos (2017). Zhang (1999), for example, examined the possibility of nonlinear dynamics in the model of John and Pecchenino (1994) and showed that cyclically or chaotically fluctuating equilibria are more likely to exist when people’s concerns are more towards greener preferences and the maintenance efficiency relative to degradation is not sufficiently high. Chen and Li (2011) introduced the habit formation of environmental quality and consumption tax to the model of John and Pecchenino (1994). The habit formation of environmental quality in the model of Chen and Li (2011) means that people get used to the environment while they grow up and will compare environmental quality in their old age with that when they were young. As a result, Chen and Li (2011) showed that cyclical fluctuations and entropic chaos may exist if households have a preference towards environmental quality and the maintenance efficiency is sufficiently low relative to degradation and the tax rate. The economy moves from complex to simple dynamics as the tax rate increases. Using an overlapping generations model where life expectancy is positively affected by the provision of public health services and by the environmental quality, Palivos and Varvarigos (2017) showed that, despite the presence of an aggregate learning-by-doing externality, the economy cannot sustain a positive growth rate in the long run if resources are not devoted to environmental preservation. Moreover, an active policy of environmental preservation is not only an important complementary engine of long-run growth but also a powerful tool of stabilization.

Zhang (1999), Chen and Li (2011), and Palivos and Varvarigos (2017), however, did not consider the role of innovation in economic growth. When we consider issues related to recent economic growth, it is noteworthy that the economic activities of industries in developed countries and some developing countries have increasingly become knowledge intensive. The economies of these countries are often termed knowledge-based economies. An important feature of such an economy is that it emphasizes innovation, including the creation of new products and production processes through industrial research and development (R&D), and the innovation is accompanied by accumulated knowledge that drives sustained growth. Accordingly, any study on the actual economic problems of a knowledge-based economy needs to construct a model that endogenously incorporates R&D and innovation. From such a perspective, the above-mentioned earlier studies are inadequate in terms of understanding the relationship between contemporary economic growth and environmental problems.

Our model leads to the theoretical possibility that the zero net emission of pollution flow is compatible with sustainable growth and consumption. In this regard, however, the economy requires GDP above a certain level. Moreover, to simultaneously achieve a zero net emission of pollution and sustained economic growth, the economy requires variability of the kindergarten rule level of abatement. In other words, the kindergarten rule level of abatement must not be fixed at a specific value. The present study makes two main contributions. First, we shed light on the relationship between the zero net emission of pollution and economic growth, which is not well understood, and address theoretically an important subject interesting environmental scientists, economists, and policy makers: whether both a zero net emission of pollution and sustained growth of GDP (consumption) are achievable when economies implement a zero net emission policy. In terms of the association with Sustainable Development Goals (SDGs), which were adopted by the United Nations General Assembly in September 2015 and have received international attention, our considerations are conducive to providing a theoretical basis for a part of SDG 8 (“Decent Work and Economic Growth”). Second, we present a dynamic macro-environmental modeling approach based on an extension to Matsuyama’s (1999) model with the idea of the kindergarten rule of Brock and Taylor (2005). To the best of our knowledge, there have been few studies on the environmental economic modeling of endogenous growth with cyclical fluctuations in a zero-emission society. That is to say, our dynamic macroenvironmental modeling approach can be interpreted as a methodological contribution in the research field of economic growth and the environment.

#### Turns their impact.

Rasmus Karlsson 17, Associate Professor in political science at Umeå University, “The Environmental Risks of Incomplete Globalisation” DOI: 10.1080/14747731.2016.1216820

Clearly, as much as energy saving and other forms of demand-side management in the rich countries may make sense within their respective domestic contexts, such measures have the unfortunate effect of reducing the political interest in financing the kind of supply-side revolution that is needed globally. Third and finally, as it is becoming increasingly clear that the politically agreed target of keeping global warming below two degrees Celsius will not be met by conventional mitigation alone, there will most likely be a significant need for energy for carbon dioxide removal (CDR) but also for adaptation in terms of for instance mass desalination for agricultural purposes, further underscoring the inadequacies of the current soft energy approach. An alternative and very different approach to climate nationalism would be to ask, what kind of technologies would be required to achieve climate stability in a world of 10+ billion people living prosperous lives? Starting from that question and working backwards such an alternative approach would shift the focus from the immediate deployment of non-scalable technologies to the innovation of massively scalable high-energy technologies capable of providing an abundant and cheap supply of clean baseload electricity (Galiana & Green, 2010). The underlying premise would be that by making clean energy significantly cheaper than today it would be possible to rapidly displace fossil fuels and effectively overcome political and cultural inertia. No longer economically competitive, existing fossil infrastructure would then be abandoned as stranded assets, even in those countries that for political reasons may doubt the seriousness of climate change or those where fossil industries may hold a strong political influence. Most importantly, such an approach would give developing countries the reliable 7 energy they need to move away from fossil fuels at the same time as they can universalise access to modern energy services. Currently, indoor air pollution from the burning of wood and charcoal causes millions of premature deaths annually while simultaneously driving deforestation. Given its inherent merits, not the least its potential to once and for all resolve long running North-South tensions in international environmental debates (Williams, 2005), it may perhaps seem strange that such an advanced technological path to climate stability has not been widely considered in the literature (Dorr, 2016; Green, 2015; Symons & Karlsson, 2015). There are of course many reasons for this, in particular the fact that since the most obvious such “high-energy” technology would be nuclear power, it would mean moving into a minefield of political risk. Despite more than sixty years of civilian nuclear power with extremely few fatalities compared to fossil energy (it is for instance worth noting that no one has yet died from radiation after the Fukushima accident in 2011), public perception of the risk of nuclear energy has been unforgiving. Given that there seems to be no hope for a rational discussion on the risks of nuclear compared to those of uncontrollable climate change, it may matter surprisingly little to know that if all of the world were to build nuclear power at the same per capita rate that Sweden and France did during the 1970’s and 1980’s, then coal- and gas-fired electricity could be replaced worldwide within a few decades or less (Qvist & Brook, 2015). However, in addition to other concerns such as proliferation (Socolow & Glaser, 2009), existing nuclear designs are highly brittle in the sense that one single major accident could potentially mean an end to expansion plans everywhere. Given the limited remaining carbon budget if catastrophic climate change is to be avoided, such fragility is obviously a strong argument against making a global mitigation strategy dependent on existing nuclear designs. Accepting that puts the focus back on fundamental energy R&D. While nuclear technologies broadly conceived are likely to play an important part in any high-energy future, finding an energy source which is proliferation-resistant, passive safe, and which has an abundant supply of fuel that would allow it to generate baseload electricity at a cost far below fossil sources will require nothing short of an energy miracle. When Darrel Moellendorf writes that hoping for such a technological breakthrough “hardly amounts to a basis for responsible policy” (Moellendorf, 2014:183) he gives voice to a commonsensical view which is widely shared in the climate policy community. Obviously, 8 committing vast social resources to fundamentally uncertain research makes little sense if there is a meaningful alternative. Yet, after more than two decades marked by an ever more polarised climate debate (Keller, 2015:223), it should be obvious that current mitigation efforts are failing (Jamieson, 2014). Even if the progressive offshoring of carbon-intensive industries may have helped in improving the carbon inventories of certain rich countries, overall emissions (in particular when including aviation and shipping) have steadily gone up since the inception of the Kyoto Protocol. The prospect of brute force mitigation through directly reduced consumption rates, as envisioned by many Greens and theorists alike (Harris, 2010),seem as remote as ever. Contrary to the hopes of Greenpeace and other environmental NGOs, Germany, which has taken on itself to lead the world into a future of renewable energy, has seen rising carbon emissions for several years following the phase-out of nuclear energy. At a global level, the share of coal power in the world’s energy mix has not been higher since the 1970’s and the overall share of carbon fuels in the total energy consumption has remained more or less stable around 86-87% since 2000 (BP, 2015). Over time however it is likely that the very richest countries, which have sufficient numbers of affluent consumers who can afford to pay higher energy prices, will be able to complete the shift to small-scale renewable energy sources, especially if much of their overall physical infrastructure is produced elsewhere and the intermittency problem can be solved through energy storage (and not as today by fossil backup capacity). Yet, simple back-of-the-envelope calculations show that providing the several thousand exajoules of clean energy annually that would be needed for a global economic convergence is more or less impossible using such technologies (Trainer, 2013). That is one of the reasons why almost all climate scenarios that succeed in stabilising the climate over the course of the 21st century do so by inserting austere assumptions with regard to energy access and, thus, overall energy demand (Pielke, Wigley, & Green, 2008). In less technical language, such restrictions essentially mean that that the poor stay poor deep into the future. Considering this, the connection between climate nationalist thinking and the current state of incomplete globalisation becomes readily visible. According to the standard Malthusian narrative, technology can never “keep up with growth in population, affluence, and consumption” (Mitchell, 2012:25). As a consequence, the only hope of achieving climate stability hinges on constraining population growth and overall human welfare. Despite its dubious ethical implications, such an argument would perhaps 9 make sense if fairly marginal reductions in growth rates would be sufficient to achieve longterm sustainability. Yet, given how deeply unsustainable the very metabolism of modern industrial society is, this is obviously not the case. In a world of 7.3 billion people, the reductions in economic activity would have to be of an almost apocalyptic magnitude to bring down per capita emissions levels so that they would be lower than what is absorbed by natural sequestration processes. Given the political impossibility of achieving such dramatic reductions in the rich countries, it is not surprising that the political attention has shifted to the task of keeping poor people away from fossil forms of development, something which in fact has already become the explicit goal of many environmental NGOs but also a kind of “carbon conditionality” imposed by for instance the U.S. Agency for International Development’s “Power Africa” initiative. While much can be said about the morality of imposing such double standards at home and abroad respectively, the most apparent implication of this is that the poor will in effect stay poor. Even if distributed solar panels may be sufficient for charging a cell phone or powering a reading lamp at night, the energy provided is of a completely different scale compared to what was needed for the sweeping modernisation processes that made broadly shared prosperity possible in Europe, North America and, most recently, North-East Asia. Psychologically unrealistic as it may be to expect the poor to remain content with being locked out from modernity in this way, the current state of incomplete globalisation is likely to frustrate or at least delay their rise. While this may ostensibly win some time in terms of lower carbon emissions, it will also have many countervailing effects such as delaying the demographic transition that would follow from more comprehensive forms of modernisation or prolong the use of informal fuels. Failure to fully integrate the world will also have another important effect for the transition to sustainability, namely to slow overall global growth rates. While it is fashionable in more critical literature to suggest that the marginal utility of further economic growth has become negative in the advanced economies (Jackson, 2011), this is to grossly misunderstand contemporary economic and political dynamics. Not only is further economic growth indispensable to ensure the financial stability of retirement schemes and to pay the health costs associated with an ageing population, it is in fact the very life elixir of society as it lessens distributional conflicts and encourages public risk-taking (Friedman, 2006). Only in a situation of strong economic growth are politicians likely to make the bold 10 investments in energy R&D needed to bring about the kind of “high-energy miracle” discussed above. As a consequence, it is possible to see an indirect link between failure to integrate the world and the prospects of financing breakthrough innovation. Yet, beyond this indirect link, there is a much more direct link in terms of the costs of violent conflict caused by global inequality, the policing of borders, and the risks of pandemics (as most recently seen in the case of Ebola in West Africa), all diverting resources away from more urgent social needs, including energy R&D. To build a world unafraid of itself Even if analytic political philosophy may not have shown much recent enthusiasm for nationalism or other forms of metaethical particularism (Caney, 2005), the world of today is still one in which life opportunities remain largely determined by a completely randomly assigned variable (place of birth) rather than individual ambition and character. Not only does this “citizenship premium” (Milanovic, 2013) create migratory pressure and fuel resentment, it also means that billions of people never get a chance to develop their full intellectual potential and, with it, their economic productivity. Despite that many of the great hopes of the Enlightenment have been fulfilled over the last centuries, it has now become common to distrust the very possibility of social progress and to doubt that humanity can ultimately build a world unafraid of itself (Bronner, 2004). Without subscribing to teleology (Wendt, 2003) there are many reasons to think that, despite the recent rhetoric of Donald Trump or other signs of backsliding, much greater optimism is in fact warranted. Not only has there been no new wave of protectionism in the wake of the financial crisis (as was the case after the crash in 1929) but the World Value Survey and other similar studies have consistently shown a movement away from traditional values and hierarchical forms of authority towards secular-rational values, greater individual freedom, and autonomy (Welzel, 2013:143). Every year, more and more people travel by airplane and are able to experience other countries and cultures first-hand. As the world gets smaller, it is becoming increasingly difficult to deny our common humanity and insist on the artificial segregation of people based on mere geographical luck. Yet, in terms of politics or ideology, there has been surprisingly little interest in even imagining a world with universal freedom of movement and shared prosperity. It is reasonable to think that this disinterest in part derives from deeply entrenched Malthusian beliefs and fears of a coming climate crisis. 11 Malthusian discourse often portrays global climate change as ultimate evidence of irresponsibility, greed or even the “cancer stage of capitalism” (Barry, 2012:138). Such descriptions show little tolerance for learning or humility with regard to the difficulties of the task. There has never been a blueprint for how to build a prosperous planetary civilisation or for how to achieve technological maturity in a way that does not destroy the biosphere. Yet, in a world of seven billion actually existing people, the question is where to go from here? As discussed above, to try to reverse the great structural processes of modernity through intentional localisation does not only seem wholly politically unrealistic, it is also most unlikely to actually deliver greater resilience or environmental sustainability. Yet, the problem of lacking realism is just as acute for those advocating breakthrough innovation or seeking to more fully integrate the world (Karlsson, 2013). In a time of public austerity, rising xenophobia, and an almost complete absence of realistic yet transformative visions at the global level, it is not surprising that climate nationalist responses have emerged as the default policy orientation. While these responses may at best slow the rate of warming, they offer little hope for the 3.5 billion people who currently lack access to modern energy and, as such, they are likely to contribute to the creation of new patterns of climate injustice. They are also problematic in the sense that for every year that a more meaningful response is delayed, the need for CDR grows. Already now, such negative emissions technology has become more or less a necessity for achieving the two degree target according to the scenarios represented in the Intergovernmental Panel on Climate Change (IPCC) database (Anderson, 2015). Whereas breakthrough energy innovation could potentially offer a source of sustained global growth as energy would become significantly cheaper, CDR is always going to come at a net cost. If CDR eventually becomes unaffordable due to prolonged political procrastination and generally inefficient mitigation policies, it is likely that the political momentum will shift towards solar radiation management (SRM) and other more risky forms of climate engineering. Instead of fearfully backing into a warming future, there is an obvious need for bold and proactive political action (Garibaldi, 2014; Karlsson, 2016). Yet, as long as mitigation is perceived as a cost and something that runs counter to broader socio-economic goals, such action is unlikely. While accelerating the transition to a high-energy planet would undoubtedly put strong upward pressure on global emissions in the short run, it would also open up a political opportunity space for effective climate action that does not exist today. In a more 12 equal and integrated world, there would be greater financial and human resources to combat climate change. Most of all, by providing a progressive account of globalisation, there would be a meaningful counter-narrative to both nationalist and neoliberal thinking. F

### Sustainable---AT: Decoupling

#### Yes decoupling---best and most recent studies AND leakage is wrong.

Zeke Hausfather 21, Director, Climate and Energy at The Breakthrough Institute, "Absolute Decoupling of Economic Growth and Emissions in 32 Countries," Breakthrough Institute, 04/06/2021, https://thebreakthrough.org/issues/energy/absolute-decoupling-of-economic-growth-and-emissions-in-32-countries.

The past 30 years have seen immense progress in improving the quality of life for much of humanity. Extreme poverty — the number of people living on less than $1.90 per day — has fallen by nearly two-thirds, from 1.9 billion to around 650 million. Life expectancy has risen in most of the world, along with literacy and access to education, while infant mortality has fallen. Despite perceptions to the contrary, the average person born today is likely to have access to more opportunities and have a better quality of life than at any other point in human history. Much of this increase in human wellbeing has been propelled by rapid economic growth driven largely by state-led industrial policy, particularly in poor-to-middle income countries.

However, this growth has come at a cost: between 1990 and 2019, global emissions of CO2 increased by 56%. Historically, economic growth has been closely linked to increased energy consumption — and increased CO2 emissions in particular — leading some to argue that a more prosperous world is one that necessarily has more impacts on our natural environment and climate. There is a lively academic debate about our ability to “absolutely decouple” emissions and growth — that is, the extent to which the adoption of clean energy technology can allow emissions to decline while economic growth continues.

Over the past 15 years, however, something has begun to change. Rather than a 21st century dominated by coal that energy modelers foresaw, global coal use peaked in 2013 and is now in structural decline. We have succeeded in making clean energy cheap, with solar power and battery storage costs falling 10-fold since 2009. The world produced more electricity from clean energy — solar, wind, hydro, and nuclear — than from coal over the past two years. And, according to some major oil companies, peak oil is upon us — not because we have run out of cheap oil to produce, but because demand is falling and companies expect further decline as consumers increasingly shift to electric vehicles.

The world has long been experiencing a relative decoupling between economic growth and CO2 emissions, with the emissions per unit of GDP falling for the past 60 years. This is the case even in countries like India and China that have been undergoing rapid economic growth. But relative decoupling alone is inadequate in a world where global CO2 emissions need to peak and decline in the next decade to give us any chance at limiting warming to well below 2℃, in line with Paris Agreement targets.

Thankfully, there is increasing evidence that the world is on track to absolutely decouple CO2 emissions and economic growth — with global CO2 emissions potentially having peaked in 2019 and unlikely to increase substantially in the coming decade. While an emissions peak is just the first and easiest step towards eventually reaching the net-zero emissions required to stop the world from continuing to warm, it demonstrates that linkages between emissions and economic activity are not an immutable law, but rather simply a result of our current means of energy production.

In recent years we have seen more and more examples of absolute decoupling — economic growth accompanied by falling CO2 emissions. Since 2005, 32 countries with a population of at least one million people have absolutely decoupled emissions from economic growth, both for terrestrial emissions (those within national borders) and consumption emissions (emissions embodied in the goods consumed in a country). This includes the United States, Japan, Mexico, Germany, United Kingdom, France, Spain, Poland, Romania, Netherlands, Belgium, Portugal, Sweden, Hungary, Belarus, Austria, Bulgaria, El Salvador, Singapore, Denmark, Finland, Slovakia, Norway, Ireland, New Zealand, Croatia, Jamaica, Lithuania, Slovenia, Latvia, Estonia, and Cyprus. Figure 1, below, shows the declines in territorial emissions (blue) and increases in GDP (red).

Chart, bar chart

Description automatically generated

To qualify as having experienced absolute decoupling, we require countries included in this analysis to pass four separate filters: a population of at least one million (to focus the analysis on more representative cases), declining territorial emissions over the 2005-2019 period (based on a linear regression), declining consumption emissions, and increasing real GDP (on a purchasing power parity basis, using constant 2017 international $USD). We chose not to include 2020 in this analysis because it is not particularly representative of longer-term trends, and consumption and territorial emissions estimates are not yet available for many countries.

There is a wide range of rates of economic growth between 2005-2019 among countries experiencing absolute decoupling. Somewhat counterintuitively, there is no significant relationship between the rate of economic growth and the magnitude of emissions reductions within the group. While it is unlikely that there is not at least some linkage between the two factors, there are plenty of examples of countries (e.g., Singapore, Romania, and Ireland) experiencing both extremely rapid economic growth and large reductions in CO2 emissions.

One of the primary criticisms of some prior analyses of absolute decoupling is that they ignore leakage. Specifically, the offshoring of manufacturing from high-income countries over the past three decades to countries like China has led to “illusory” drops in emissions, where the emissions associated with high-income country consumption are simply shipped overseas and no longer show up in territorial emissions accounting. There is some truth in this critique, as there was a large increase in emissions embodied in imports from developing countries between 1990 and 2005. After 2005, however, structural changes in China and a growing domestic market led to a reversal of these trends; the amount of emissions “exported” from developed countries to developing countries has actually declined over the past 15 years.

This means that, for many countries, both territorial emissions and consumption emissions (which include any emissions “exported” to other countries) have jointly declined. In fact, on average, consumption emissions have been declining slightly faster than territorial emissions since 2005 in the 32 countries we identify as experiencing absolute decoupling. Figure 2, below, shows the change in consumption emissions (teal) and GDP (red) between 2005 and 2019.

Chart, bar chart

Description automatically generated

There is a pretty wide variation in the extent to which these countries have reduced their territorial and consumption emissions since 2005. Some countries — such as the UK, Denmark, Finland, and Singapore – have seen territorial emissions fall faster than consumption emissions, while the US, Japan, Germany, and Spain (among others) have seen consumption emissions fall faster. Figure 3 shows reductions in consumption and territorial emissions for each country, with the size of the dot representing the size of the population in 2019.

[Chart omitted]

Absolute decoupling is possible. There is no physical law requiring economic growth — and broader increases in human wellbeing — to necessarily be linked to CO2 emissions. All of the services that we rely on today that emit fossil fuels — electricity, transportation, heating, food — can in principle be replaced by near-zero carbon alternatives, though these are more mature in some sectors (electricity, transportation, buildings) than in others (industrial processes, agriculture).

### Alt---1AR

#### It’s too ingrained for it to change.

Thomas Wiedmann et al. 20, Sustainability Assessment Program, School of Civil and Environmental Engineering, UNSW Sydney; Manfred Lenzen, ISA, School of Physics, The University of Sydney; Lorenz T. KeyßEr, Institute for Environmental Decisions, Department of Environmental Systems Science, ETH Zürich; Julia K. Steinberger, Sustainability Research Institute (SRI), School of Earth and Environment, University of Leeds, "Scientists’ Warning on Affluence," Nature Communications, Vol. 11, 06/19/2020, Springer.

Growth imperatives are active at multiple levels, making the pursuit of economic growth (net investment, i.e. investment above depreciation) a necessity for different actors and leading to social and economic instability in the absence of it7,52,60. Following a Marxian perspective as put forward by Pirgmaier and Steinberger61, growth imperatives can be attributed to capitalism as the currently dominant socio-economic system in affluent countries7,51,62, although this is debated by other scholars52. To structure this topic, we will discuss different affected actors separately, namely corporations, states and individuals, following Richters and Siemoneit60. Most importantly, we address the role of the super-affluent consumers within a society, which overlap with powerful fractions of the capitalist class. From a Marxian perspective, this social class is structurally defined by its position in the capitalist production process, as financially tied with the function of capital63. In capitalism, workers are separated from the means of production, implying that they must compete in labour markets to sell their labour power to capitalists in order to earn a living.

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

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

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

Super-affluent consumers drive consumption norms

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

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

Lastly, in capitalism, workers must compete against each other in the labour market in order to earn a living from capitalists7,63. Following Siemoneit68, this can lead to a similar imperative to net invest (increase the level of consumption/investment) as is observed with capitalists. In order to stay competitive, individuals are pushed to increase time and cost efficiency by investing in cars, kitchen appliances, computers and smartphones, by using social media and online trade etc. This efficiency consumption—effectively another facet of the rebound effect38,47,68—helps to manage high workloads, thus securing an income, while maintaining private life. This is often accompanied by trends of commodification61, understood as the marketisation of products and services which used to be provisioned through more time-intensive commons or reciprocal social arrangements, e.g. convenience food vs. cooking together. As in the food example74, this replacement of human labour with energy- and material-intensive industrial production typically increases environmental pressures47,75. Through these economic pressures, positive feedback loops and lock-ins are expected to emerge, since other consumers need to keep up with these investments or face disadvantages, e.g. when car or smartphone ownership become presupposed. Taken together with positional consumption, structural barriers to sufficiency and the substantial advertising efforts by capitalists, these mechanisms explain to a large extent why consumers seem so willing to increase their consumption in accordance with increasing production60.