# 1NC --- NDT R3

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#### Business practices are ongoing conduct defined by the behaviors of many market participants

Kerry Lynn Macintosh 97, Associate Professor of Law, Santa Clara University School of Law. B.A. 1978, Pomona College; J.D. 1982, Stanford University, “Liberty, Trade, and the Uniform Commercial Code: When Should Default Rules Be Based On Business Practices?,” 38 Wm. & Mary L. Rev. 1465, Lexis

These new and revised articles reflect a strong trend toward choosing default rules 4 that codify existing business practices. 5 [FOOTNOTE 5 BEGINS] In this Article, the term "business practices" is used to refer to practices that emerge over time as countless market participants exercise their freedom to engage in profitable transactions. For an account of the evolution of business practices, see infra Part II. As used here, "business practices" is broader and less technical than "trade usage," which the Code narrowly defines as "any practice or method of dealing having such regularity of observance in a place, vocation, or trade as to justify an expectation that it will be observed with respect to the transaction in question." U.C.C. 1-205(2). [FOOTNOTE 5 ENDS] This is particularly true of the recent revisions to Articles 3 (Negotiable Instruments), 4 (Bank Deposits and Collections) and 5 (Letters of Credit).

#### ‘Prohibition’ must ban all instances of anticompetitive behavior

James Lane Buckley 91, Judge on the United States Court of Appeals for the District of Columbia Court, BA and JD from Yale University, Former Undersecretary for Security Assistance at the State Department, Former United States Senator from New York, “Hazardous Waste Treatment Council v. Reilly”, United States Court of Appeals for the District of Columbia Circuit, 938 F.2d 1390, 1395-1396, 1991 U.S. App. LEXIS 16095, 7/26/1991, Lexis

Petitioners claim that the EPA considers a state law to "act as a prohibition" under the regulation only when it bans all treatment, storage, and disposal within a State, and they point to the ALJ's statement, based on his reading of the preamble to the regulations, 45 Fed. Reg. at 33,395, that the EPA "appears to have construed the phrase 'act as a prohibition' in [paragraph (b)] as equivalent to an outright ban or refusal to accept hazardous waste for treatment, storage, or disposal." ALJ Decision at 112. Petitioners contend that the regulation must embrace any law that would even indirectly, as in the instant case, prohibit any treatment facility; otherwise, a State could accomplish a total ban one facility at a time. Senate Bill 114, they charge, epitomizes the "NIMBY" syndrome: In response to the needs of the nation for treatment of hazardous waste, North Carolina has simply said, "Not in my backyard." By refusing to respond, petitioners urge, the EPA ignores its duty to monitor state programs.

Although, at oral argument, government counsel [\*\*13] attempted to defend the "ban on all treatment" position that petitioners ascribe to the EPA, that is not the basis on which the agency concluded that Senate Bill 114 did not act as a prohibition within the meaning of section 271.4(b). In explaining why the second condition of paragraph (b) had not been met, the Regional Administrator emphasized that of the 485 riparian miles available in North Carolina for a facility of the kind proposed by GSX, 333 remained available under the Act, and noted that a smaller plant could be built at the Laurinburg site. Final Decision at 2. We therefore construe the EPA's decision to mean that a state law "acts as a prohibition" on the treatment of hazardous wastes when it effects a total ban on a particular waste treatment technology within a State, and nothing more.

[\*1396] Such a construction is reasonable and merits deference. The language of paragraph (b), which uses the word "prohibit[]" rather than "impede[]" or "restrict[]" as in the case of paragraph (a), suggests that the former allows States greater latitude in regulating particular treatment facilities before a prohibition is found to exist. This is consistent with the preamble's expression of [\*\*14] a desire to encourage the development of state programs by avoiding the establishment of "very tight standards." See 45 Fed. Reg. at 33,385. Second, defining prohibition in terms of the ban of a particular technology falls well within the language of paragraph (b). Finally, we see nothing inconsistent between this construction and the language of the underlying statute, 42 U.S.C. § 6926(b), which merely asserts that a state program may not be authorized if "such program is not consistent with the Federal and State programs applicable in other States." This language allows the agency enormous latitude in structuring its own implementing regulations and in interpreting them.

#### Vote neg for limits and grounds key to link uniqueness and a unidirectional topic. Fringe standards dodge topic links, AND too many possible standards, each requiring distinct answers

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#### “The” before a noun means whole

Webster’s 5 (Merriam Webster’s Online Dictionary, [http://www.m-w.com/cgi-bin/dictionary](about:blank))

The

4 -- used as a function word before a noun or a substantivized adjective to indicate reference to a group as a whole <the elite>

#### “Private Sector” means all --- They are only export cartels

Senate Manual 11 (Senate Document No. 112-1)//babcii

The term ``private sector'' means all persons or entities in the United States, including individuals, partnerships, associations, corporations, and educational and nonprofit institutions, but shall not include State, local, or tribal governments.112 S. Doc. 1

#### Vote NEG for limits and grounds --- Subsets explodes the topic to thousands of affs, and removes core controversy

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#### The United States federal judiciary should substantially increase prohibitions on anticompetitive export cartels legally immunized by the United States when those export cartels harm the markets of foreign nations without protections for export cartels.

#### The courts have broad authority

Hanley, 21 (Daniel A. Hanley, a policy analyst at the Open Markets Institute., 4-6-2021, accessed on 8-10-2021, Slate, "How Antitrust Lost Its Bite", https://slate.com/technology/2021/04/antitrust-hearings-congress-legislation-bright-line-rules.html)//Babcii

History has consistently shown that only bright-line rules will lead to an effective and vigorous enforcement environment, as they do in other areas of law, and prevent the judiciary from favoring dominant economic enterprises and distorting the antitrust laws to preference increased concentration. The Supreme Court’s original development of the rule of reason and its subsequent gutting of the enforcement of the Clayton Act in the 1930s is particularly illustrative of why bright-line rules are necessary. A critical weakness of the Sherman Act when it was passed in 1890 was that it did not incorporate bright-line rules and left the interpretation of the act almost entirely to the judiciary. Despite its broad moral intentions, the first 15 years of its enforcement were anemic against concentrated private power and even [hostile to organized labor](https://escholarship.org/uc/item/8cj0z1tq). Eventually the federal government would obtain its first significant victory [in 1904](https://en.wikipedia.org/wiki/Northern_Securities_Co._v._United_States), but the legal standard that the court would use to determine the legality of antitrust violations was not fully decided until the 1911 Standard Oil case, in which the Supreme Court codified the rule of reason. [Standard Oil v. United States](https://en.wikipedia.org/wiki/Standard_Oil_Co._of_New_Jersey_v._United_States) is widely known for breaking up the company. However, the case was actually a pyrrhic victory for antitrust enforcers. In the case, the court created the foundation for the rule of reason by declaring that only “unreasonable” trade practices (known as restraints of trade) were illegal under the Sherman Act. In other words, the judiciary in Standard Oil anointed itself with unilateral discretionary power to manage and organize the economy and neutered the Sherman Act’s application. Outrage from Congress and the public over the judiciary’s seizure of power resulted in swift action. Less than three years later, Congress would try to reassert its position to ensure a deconcentrated marketplace with the Clayton Act. When Congress enacted the Clayton Act in 1914, its primary goal was to supplement the Sherman Act by bolstering a plaintiff’s ability to arrest certain enumerated conduct in its incipiency—to nip monopolistic behavior in the bud. The Clayton Act explicitly lessened the litigation burden on plaintiffs for certain exclusionary practices, including certain forms of tying (conditioning the purchase of a product on the purchase of another product), price discrimination, and exclusive dealing (contracts or coercive behavior that prevents suppliers or distributors from engaging with a firm’s rivals). Most importantly, Congress included in the Clayton Act a highly deferential and plaintiff-friendly legal standard meant to prohibit mergers (although only limited to acquisitions of assets and not for stock) that only “may be to substantially lessen competition” or “tend to create a monopoly.” The Clayton Act made clear that Congress was trying to arrest certain antitrust violations such as mergers as a means to grow corporate operations, and to reverse the Supreme Court’s declaration in [Standard Oil](https://en.wikipedia.org/wiki/Standard_Oil_Co._of_New_Jersey_v._United_States). However, the Supreme Court would instead successfully hijack this antitrust law too, in order to favor its own prescription for managing the economy.

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#### The private sector should establish an industry policy of self-regulation that prohibits export cartels when those cartels harm the markets of foreign nations without protections for export cartels

#### The CP establishes a corporate standard that solves better than the plan and avoids the DA

**Valentine, 13** (Debra Valentine, Former General Counsel for the Federal Trade Comission, 7-18-2013, accessed on 3-8-2022, Federal Trade Commission, "Industry Self-Regulation and Antitrust Enforcement: An Evolving Relationship", https://www.ftc.gov/public-statements/1998/05/industry-self-regulation-and-antitrust-enforcement-evolving-relationship)//Babcii

Industry **self-regulation** also brings other public policy or "good government" advantages. To begin with, the private sector has **substantial "hands-on"** experience, which often enables it to address a problem more capably than could a government agency. For example, an expert professional association is better positioned than governmental enforcers to determine who is qualified to receive certification as an accountant or a financial planner or a language translator.

In addition, an industry's self-regulatory efforts are often quicker, more flexible, less adversarial, and therefore **less burdensome**, than governmental regulation. This is true both in adopting and in enforcing standards. Private sector self-regulation is thus at times less likely to **impede innovation** inadvertently and more efficient for society.

Industry **self-regulation** also **allows government to devote its scarce resources to** those **competition policy matters** for which government is best suited. At the same time, industry self-regulation can provide guidance, **deterence and enforcement** on matters where government cannot, or should not, intervene. For example, some practices that taint or injure an industry's reputation are not illegal -- such as fighting or betting by athletes -- but may be an appropriate target for self regulation.

Finally, through their power to repudiate and reward, industry self-regulatory bodies can rapidly achieve a high degree of **compliance** with their standards of competence, safety or design. In most fields, a good reputation with competitors, vertically related industries, and consumers is vital to success. Few companies want to jeopardize that **reputation** by failing to abide by measures adopted by their peers. This **risk of condemnation by other firms**, and thus possible rejection by **consumers**, can be **a potent sanction.**

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#### GOP wins now

Rothenberg 3-30 (Stuart Rothenberg, 3-30-2022, "Stuart Rothenberg: New polls confirm Democratic problems for November," Denver Gazette, <https://denvergazette.com/ap/business/stuart-rothenberg-new-polls-confirm-democratic-problems-for-november/article_e3a281a0-0b3c-5c85-8d0c-88ddd2054baa.html>) //bp

Generic Ballot The Pew Research survey showed voters split evenly on the “generic ballot,” with 43 percent of registered voters planning on voting for the Democratic and for the Republican nominees for Congress in November. The NBC News survey found 46 percent of respondents preferring a Congress controlled by Republicans, while 44 percent favored a Democratic-controlled Congress. Both surveys are good news for Republicans. Historically, the generic ballot test has underestimated the GOP vote. Even more important, voters who decide late in a cycle — including those who are now “undecided” about their congressional vote later this year — tend to reflect the national mood, which currently shows an unpopular president and a public that believes the country is headed “off on the wrong track.” The large number of Democratic retirements could also give Republicans additional targets, though that could be offset by a surprisingly good Democratic redistricting cycle. Turnout, of course, is always crucial, and once again the news is not good for Democrats. The Pew Research Center survey found Republicans are 10 points more likely than Democrats to say that partisan control of Congress “really matters.” That difference in intensity is likely to translate into a significant turnout advantage for the GOP. Four years ago, a slightly larger percentage of Democrats (67 percent) than Republicans (65 percent) said that it mattered which party controlled Congress. That November, Democrats re-took the House majority from the GOP, while the GOP added two seats to its majority in the Senate. Bottom line Biden’s relatively strong performance uniting the world against the Russian invasion of Ukraine hasn’t benefited the president yet. At the same time, the economy remains a huge political problem for him even though economic growth is strong and unemployment remains low. Voters seem focused on bad news (such as inflation), and Republican voters look motivated as the midterms approach.

#### The plan flips control

Zephyr Teachout 20, Associate Professor of Law at Fordham University School of Law, BA from Yale in English, MA in Political Science from Duke University, JD from Duke University, National Director of the Sunlight Foundation, Non-resident Fellow at the Berkman Center for Internet and Society at Harvard Law School, “A Blueprint for a Trust-Busting Biden Presidency”, The New Republic, 12/18/2020, https://newrepublic.com/article/160646/biden-antitrust-blueprint-monopoly-busting

Just as important, given the precarious political footing of the incoming Biden administration, is the potent electoral appeal of such an agenda—something that FDR also well understood as he instituted federal income supports as the basis for a Democratic governing coalition that spanned generations. Antitrust is one of the few policy arenas in which aggressive action will win Biden the devoted support from the activist left wing of the Democratic Party, while splitting apart and exposing the always unsustainable economic arguments mounted against crony capitalism by self-styled populists on the right. For starters, this realignment of the Democratic Party’s vision of the American political economy would go a long way to help Democrats win the Senate in 2022—a cycle that boasts an unusual number of vulnerable GOP incumbents, weighed down with the dismal Trump-McConnell legacy on Covid relief. The opportunity that Biden and the Democrats need to seize here stems from the basic fact that antitrust politics is not like other politics. Traditional left and right loyalties simply do not hold within its orbit. The economic populists of the right hate corporate monopolies as much as working-class progressives and immigrant small-business owners do. It’s not for nothing that Ted Cruz keeps yelling about monopolies—or that Trump, when he first campaigned in 2016, and when he was clearly losing in 2020, turned to attacking corporate monopolies. Trump of course reneged on his trust-busting promises, but he understood the rhetorical power of saying that “big media, big money, and big tech” were all against him. On the front lines of Democratic policymaking, meanwhile, a generation’s worth of neoliberal giveaways to these sectors is finally yielding to a new social democratic consensus. In antitrust politics, Amy Klobuchar, Elizabeth Warren, and Bernie Sanders share their anger with Andrew Yang and Scott Galloway—a beloved tech business guru who rooted for Bloomberg. Within the electorate proper, the depth of the emerging new antitrust consensus is even more striking. One recent poll by Data for Progress showed that 74 percent of Republicans and 80 percent of Democrats are “very concerned” or “somewhat concerned” about monopolies in the U.S. economy. The same survey showed the number of people who support breaking up big tech companies outnumbers those who oppose it by a two-to-one margin, again with no significant Democratic-Republican divide on the question. Indeed, some surveys now show that Republicans are more likely to see tech companies as having too much political power. A Harvard CAPS/Harris survey found similar numbers in 2019, with nearly 70 percent of voters saying that big tech should be subject to antitrust review, and had used market power to gain enormous profits. Almost two-thirds of Americans also told Data for Progress they wanted actions against big tech. And while big tech soaks up a great deal of attention as the most recent monopoly player on the block, the same trend holds through most major sectors of the U.S. economy—voters see a plague of bigness, and are increasingly clamoring for the federal government to intervene. A 2020 poll by RuralOrganizing.org found that among rural voters, fighting corporate power is a top priority. Sixty-nine percent of the respondents in the survey believed that “a handful of corporate monopolies now run our entire economy.” Almost half said they’d be more likely to support a political leader combating this pattern of top-down concentration and endorsed “a moratorium on factory farms and corporate food and agriculture monopolies.” Opposition to the 2018 Bayer-Monsanto merger reached as high as 93 percent in one poll, with critics citing very sophisticated economic arguments for their opposition. More than 90 percent of respondents, for example, were concerned that the newly merged ag-and-medical giant would “use its dominance in one product to push sales of other products.” These aren’t the voices of diehard Democrats with a few Republican crossovers, or vice versa. Within traditional political and policy disputes, you don’t see anything close to such openings for trans-partisan accord. In one representative 2020 Hill-HarrisX survey, for instance, 88 percent of Democrats supported Medicare for All, while 46 percent of Republicans did. Antitrust, by contrast, is foundationally bipartisan, interdenominational, cross-cutting—everything Biden said he wanted to be during his general election campaign and in his victory speech. Unlike other well-flogged economic or culture-war issues, antitrust affords an inviting path out of the bitter cul-de-sacs of prevailing political debate. In an age of trench-warfare–style base mobilizations, the antitrust agenda promises something else: a vision of widening opportunities for ordinary citizens, the basic American civic ethos of giving people a fair shot, and a governing plan that could actually unite Republican and Democratic support.

#### That ends the filibuster

Brigham 21—(staff writer). Bob Brigham. June 28, 2021. “Here’s why the filibuster will be on the ballot in the 2022 midterms”. RawStory. <https://www.rawstory.com/filibuster-senate-2022-midterms/>. Accessed 7/13/21.

The filibuster will essentially be on the ballot during the 2022 midterm elections, according to a new analysis by The Washington Post.

"In many ways, the current Democratic Party debate over the filibuster is an academic one. The party has only 50 votes in the Senate, and two of those 50 senators have made clear they won't eliminate it. It seems no amount of pressure in the world will move Sen. Kyrsten Sinema (D-AZ) and Sen. Joe Manchin III (D-WV) off that position," Aaron Blake wrote. "But that doesn't mean the debate doesn't matter — or that this issue couldn't soon come into starker relief. And that's because, increasingly, the filibuster is very much on the ballot in 2022."

"Democrats have basically five good pickup opportunities in the Senate right now: **in** Florida, North Carolina, **Ohio, Pennsylvania and Wisconsin**. And in all five, their top contenders have now made clear their opposition to the filibuster will be a feature of their campaigns," Blake explained.

#### That causes civil discohesion and war.

Weich 21—(dean of the University of Baltimore School of Law, assistant attorney general from 2009 to 2012). Ronald Weich. 4/14/2021. “A Post-Filibuster World Would Be a Nightmare for Progressives”. Politico. <https://www.politico.com/news/magazine/2021/04/14/post-filibuster-world-would-be-nightmare-for-progressives-481501>. Accessed 7/13/21.

The U.S. system is different: a rigid, increasingly polarized two-party, winner-take-all-contraption where power is often decided by a tiny margin. Whoever wins, the Senate filibuster is a cushion against the sudden imposition of that party’s policy wish list on the rest of the country. Without that cushion, each shift in congressional control will unleash a legislative free-for-all. Half of the country will be euphoric and the other half infuriated. This would be an unhealthy scenario for any democracy, but an especially alarming prospect for ours, where there is already so much distrust of institutions and demonization of opponents, and where the violence of Jan. 6 by a pro-Trump mob may be a harbinger of things to come. Most fundamentally, it is unhealthy if the process by which a nation’s policy disputes are resolved is up for grabs. Just as baseball teams don’t get to claim four outs when they come to bat, the ground rules of our democracy must be obeyed. Challenges to the umpires of democracy — calls to disregard state-certified election results, or to fire the nonpartisan Senate parliamentarian for her interpretation of Senate rules, or Trump’s unceasing attacks on our nation’s courts — should be condemned. The rule of law is not a mere slogan. It means that laws and rules apply equally to all and can be changed only by legitimate means. So, what’s the solution for those who bemoan the current gridlock but want to avoid civil war? At least give the traditional legislative process a chance to work. It is noteworthy that 10 Republicans were willing to negotiate with President Joe Biden about coronavirus relief. Their initial offer was too low and Biden knew that negotiation was unnecessary since he had the option to pass his bill under filibuster-less reconciliation process. But if 10 GOP senators were willing to visit the Oval Office to talk about compromise on one bill, shouldn’t Democrats at least explore that avenue on other bills before blowing up the chamber?

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#### FTC enforcing privacy now --- Resources are key

John O. McGinnis\* and Linda Sun\*\* 20. \*George C. Dix Professor, Northwestern University, and Associate-Designate, Wilmer Pickering Hale & Dorr LLP. “Unifying Antitrust Enforcement for the Digital Age.” Northwestern Public Law Research Paper No. 20-20. https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3669087

The FTC needs more resources to adequately address the nation’s growing privacy concerns. Currently, the FTC oversees both consumer protection—encompassing privacy—and antitrust,249 making the FTC the chief federal agency on privacy policy and enforcement250 and the nation’s de-facto privacy agency.251 The agency has long-standing experience in enforcing privacy statutes252 and also has special privacy assets, such as an internet lab capable of high-quality tech forensics to track invasions of privacy.253 The FTC, however, has failed to keep pace with the massive growth of privacy concerns—a phenomenon also driven by modern technology. Very few Americans feel conﬁdent in the privacy of their information in the digital age.254 According to a 2019 study, over 80% of Americans feel that they have little to no control over the data collected on them by companies and the government.255 To adequately address privacy concerns, the FTC needs more resources.256 The agency has been explicit that it needs more manpower to police tech companies. In requesting increased funding from Congress, FTC Director Joseph Simons said the money would allow the agency to hire additional staff and bring more privacy cases.257 A former director of the FTC’s Bureau of Consumer Protection, which houses the privacy unit, has called the FTC “woefully understaffed.”258 As of the spring of 2019, the FTC had only forty employees dedicated to privacy and data security, compared to 500 and 110 employees at comparable agencies in the UK. and Ireland, respectively.259 Without more lawyers, investigators, and technologists, the FTC will be forced to conduct privacy investigations less thoroughly, and in some cases, forgo them altogether.260 Currently, the FTC’s resources are spread thin across multiple missions, to the detriment of its privacy efforts. Removing the agency’s antitrust responsibilities would reallocate resources from the antitrust department to its privacy unit and other areas of consumer protection. Further, it would free up the scarce time of the commissioners to oversee this essential effort.261

#### Antitrust enforcement saps up finite resources and personnel

Tara L. Reinhart, et al. 21. \*\*Head of Skadden, Arps, Slate, Meagher & Flom LLP’s Antitrust/Competition Group. \*\*Steven C. Sunshine, Co-head of Skadden, Arps, Slat, Meagher & Flom LLP’s Antitrust/Competition Group. \*\*David P. Whales, antitrust lawyer with over 25 years of experience in both private and public sectors. \*\*Julia Y. York, partner at Skadden, Arps, Slat, Meagher & Flom LLP. \*\*Bre Jordan, associate at Skadden, Arps, Slat, Meagher & Flom LLP focusing on antitrust law. “Lina Khan’s Appointment as FTC Chair Reflects Biden Administration’s Aggressive Stance on Antitrust Enforcement.” 6/18/21. https://www.skadden.com/insights/publications/2021/06/lina-khans-appointment-as-ftc-chair

Second, like all antitrust enforcers, Ms. Khan and the FTC will face resource constraints. Bringing antitrust litigation is an expensive and laborious process, often requiring millions of dollars for expert fees and a large army of FTC staff attorneys and taking many months or even years to accomplish. Typically, the FTC can only litigate a handful of antitrust matters at a time. It seems likely that Congress will provide more funding to the FTC in the current environment, but even with these extra resources, the FTC will still have to pick its cases carefully and cannot challenge every deal or every instance of alleged unlawful conduct.

#### Extinction

Mike Thomas 20. Quoting AI experts including MIT Physics Professors, Senior Features Writer for BuiltIn. THE FUTURE OF ARTIFICIAL INTELLIGENCE: 7 ways AI can change the world for better ... or worse, Updated: April 20, 2020, <https://builtin.com/artificial-intelligence/artificial-intelligence-future>

Klabjan also puts little stock in extreme scenarios — the type involving, say, murderous cyborgs that turn the earth into a smoldering hellscape. He’s much more concerned with machines — war robots, for instance — being fed faulty “incentives” by nefarious humans. As MIT physics professors and leading AI researcher Max Tegmark put it in a 2018 TED Talk, “The real threat from AI isn’t malice, like in silly Hollywood movies, but competence — AI accomplishing goals that just aren’t aligned with ours.” That’s Laird’s take, too. “I definitely don’t see the scenario where something wakes up and decides it wants to take over the world,” he says. “I think that’s science fiction and not the way it’s going to play out.” What Laird worries most about isn’t evil AI, per se, but “evil humans using AI as a sort of false force multiplier” for things like bank robbery and credit card fraud, among many other crimes. And so, while he’s often frustrated with the pace of progress, AI’s slow burn may actually be a blessing. “Time to understand what we’re creating and how we’re going to incorporate it into society,” Laird says, “might be exactly what we need.” But no one knows for sure. “There are several major breakthroughs that have to occur, and those could come very quickly,” Russell said during his Westminster talk. Referencing the rapid transformational effect of nuclear fission (atom splitting) by British physicist Ernest Rutherford in 1917, he added, “It’s very, very hard to predict when these conceptual breakthroughs are going to happen.” But whenever they do, if they do, he emphasized the importance of preparation. That means starting or continuing discussions about the ethical use of A.G.I. and whether it should be regulated. That means working to eliminate data bias, which has a corrupting effect on algorithms and is currently a fat fly in the AI ointment. That means working to invent and augment security measures capable of keeping the technology in check. And it means having the humility to realize that just because we can doesn’t mean we should. “Our situation with technology is complicated, but the big picture is rather simple,” Tegmark said during his TED Talk. “Most AGI researchers expect AGI within decades, and if we just bumble into this unprepared, it will probably be the biggest mistake in human history. It could enable brutal global dictatorship with unprecedented inequality, surveillance, suffering and maybe even human extinction. But if we steer carefully, we could end up in a fantastic future where everybody’s better off—the poor are richer, the rich are richer, everybody’s healthy and free to live out their dreams.”

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#### The fifty states and all relevant territories should expand their antitrust laws to include export cartels legally immunized by the United States when those export cartels harm the markets of foreign nations without protections for export cartels.

#### Solves – no risk of preemption

Waller, 03 (Spencer Weber Waller, Professor and Director of the Institute for Consumer Antitrust Studies, Loyola University Chicago School of Law, “The Incoherence of Punishment in Antitrust”, Chicago-Kent Law Review, April, 2003, https://scholarship.kentlaw.iit.edu/cklawreview/vol78/iss1/8/)//babcii

The remaining governmental enforcer is at the state rather than the federal level. The attorneys general of the fifty states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other United States dependencies and territories each enforce their own state or territorial level antitrust laws. 61 Most of these laws track the substance of the Sherman Act fairly closely, but each state has different exemptions, procedures, and remedies. The Supreme Court is quite clear that the states (and territories) are normally free to grant greater or lesser rights than the federal antitrust laws without preemption being an issue.6 One important difference is that federal antitrust law permits suit for treble damages only for direct purchasers-those who dealt directly with the unlawful price fixers or monopolists-while a substantial number of states permit suits by indirect purchasers under state antitrust law. 63 The states also frequently bring suit under the federal antitrust laws. First, the states purchase an enormous amount of goods and services. Where they are victims of antitrust violations in their capacity as purchasers they are entitled to treble damages like any other private plaintiff.64 Second, the states have been granted parens patriae powers to sue on behalf of any natural persons in their jurisdiction who have been injured by reason of any antitrust violation.65 The states have come under tremendous criticism for their more activist posture. Critics have argued that the states are merely free riders on federal enforcement efforts or, when the states pursue a separate agenda, they are doing so for narrow partisan political reasons unrelated to sound antitrust and competition policy.66 The states understandably disagree. Their ability to sue on their own behalf and on behalf of their citizens is enshrined in federal legislation. Their ability to enact their own state antitrust statutes and empower their officials and private parties to sue under them flows from their sovereign status under the Constitution. The states also dispute the free rider label, pointing to important antitrust litigation where either the states acted before the federal government, or where the federal government took no action at all.67 They point to the efficiency-enhancing aspects of pooling resources and of collective investigation and prosecution of nationwide cases. 68 Finally, the states have long argued that the state attorneys general are more sensitively attuned to the issues affecting the citizens of their states than the federal antitrust agencies could ever be. They can therefore better represent the public interest even at the risk of coming under the sway of interest groups representing competitors of a potential antitrust defendant.

## Case

### Advantage 1

#### Trade doesn’t prevent war

Charles Miller, Poli Sci PhD, 14, lecturer at Australian National University’s Strategic and Defence Studies Centre, 4/7/14, “Globalisation and war,” http://www.aspistrategist.org.au/globalisation-and-war

John O’Neal and Bruce Russett’s work is perhaps the best known in this regard—and Steven Pinker cites them approvingly in his book The Better Angels of Our Nature. Analysing trade and conflict data from the nineteenth to the twenty-first centuries, they found that trade flows do have a significant impact in reducing the chances of conflict, even when taking a variety of other factors into account. But their conclusions have in turn been questioned by other scholars. For one thing, their model failed to take three things into account. First, it’s quite possible that peace causes trade rather than the other way around—no company wants to start an export business to another country if it anticipates that business linkages will be cut off by war further down the line. Second, conflict behaviour exhibits what’s called ‘network effects’ — if France and Germany are at peace, chances are Belgium and Germany will be too. And third, both the likelihood of conflict and the level of trade are influenced by the number of years a pair of countries has already been at peace—because prolonged periods of peace increase mutual trust. Take any of these factors into account, and studies have shown (here and here) that the apparent relationship between trade flows and peace disappears.

Perhaps, though, conceiving of globalisation solely in terms of trade flows is mistaken. Alternative indicators of globalisation include foreign direct investment, financial openness and the levels of government intervention in economic relations with the rest of the world. Data on those variables is less extensive than on trade flows, usually dating back only to the post World War II period. But some analysts, such as Patrick McDonald and Erik Gartzke, have argued that a significant correlation can be found between them and a reduction in the probability of conflict. Those findings, newer than O’Neal and Russett’s, haven’t yet been subjected to the same intense scrutiny, so may in turn be qualified by future research.

What does all that mean for the policy-maker? The statistical evidence certainly doesn’t tell us that globalisation has made war in East Asia impossible. ‘Cromwell’s law’ counsels us that a logically conceivable event should never be assigned a probability of zero. The most we could conclude is that globalisation has made such an occurrence much less likely. There’s some hopeful numerical evidence that globalisation does indeed have that effect, but the evidence isn’t so compelling that we can substitute an economic engagement policy for a security policy. By all means, let’s continue to promote trade in the Asia-Pacific. But we should also continue to be prepared for scenarios which are unlikely but would be hugely

#### Obviously trade collapse = econ collapse but just in case (JCCC Blue)

Oppenheimer 20 – (Michael Oppenheimer, Clinical Professor at the Center for Global Affairs at New York University, Senior Consulting Fellow for Scenario Planning at the International Institute for Strategic Studies, Former Executive Vice President at The Futures Group, Member of the Council on Foreign Relations, The Foreign Policy Roundtable at the Carnegie Council on Ethics and International Affairs, and The American Council on Germany; 10-2-2020, The Future of Global Affairs: Managing Discontinuity, Disruption and Destruction, "The Turbulent Future of International Relations," doa: 10-23-2021) url: <https://link.springer.com/chapter/10.1007/978-3-030-56470-4_2>

Four structural forces will shape the future of International Relations: globalization (but without liberal rules, institutions, and leadership)1; multipolarity (the end of American hegemony and wider distribution of power among states and non-states2); the strengthening of distinctive, national and subnational identities, as persistent cultural differences are accentuated by the disruptive effects of Western style globalization (what Samuel Huntington called the “non-westernization of IR”3); and secular economic stagnation, a product of longer term global decline in birth rates combined with aging populations.4 These structural forces do not determine everything. Environmental events, global health challenges, internal political developments, policy mistakes, technology breakthroughs or failures, will intersect with structure to define our future. But these four structural forces will impact the way states behave, in the capacity of great powers to manage their differences, and to act collectively to settle, rather than exploit, the inevitable shocks of the next decade.

Some of these structural forces could be managed to promote prosperity and avoid war. Multipolarity (inherently more prone to conflict than other configurations of power, given coordination problems)5 plus globalization can work in a world of prosperity, convergent values, and effective conflict management. The Congress of Vienna system achieved relative peace in Europe over a hundred-year period through informal cooperation among multiple states sharing a fear of populist revolution. It ended decisively in 1914. Contemporary neoliberal institutionalists, such as John Ikenberry, accept multipolarity as our likely future, but are confident that globalization with liberal characteristics can be sustained without American hegemony, arguing that liberal values and practices have been fully accepted by states, global institutions, and private actors as imperative for growth and political legitimacy.6 Divergent values plus multipolarity can work, though at **significantly lower levels of economic growth**-in an autarchic world of isolated units, a world envisioned by the advocates of decoupling, including the current American president. 7 Divergent values plus globalization can be managed by hegemonic power, exemplified by the decade of the 1990s, when the Washington Consensus, imposed by American leverage exerted through the IMF and other U.S. dominated institutions, overrode national differences, but with real costs to those states undergoing “structural adjustment programs,”8 and ultimately at the cost of global growth, as states—especially in Asia—increased their savings to self insure against future financial crises.9

But all four forces operating simultaneously will produce a future of increasing internal polarization and cross border conflict, diminished economic growth and poverty alleviation, weakened global institutions and norms of behavior, and reduced collective capacity to confront emerging challenges of global warming, accelerating technology change, nuclear weapons innovation and proliferation. As in any effective scenario, this future is clearly visible to any keen observer. We have only to abolish wishful thinking and believe our own eyes.10

Secular Stagnation

This unbrave new world has been emerging for some time, as US power has declined relative to other states, especially China, global liberalism has failed to deliver on its promises, and totalitarian capitalism has proven effective in leveraging globalization for economic growth and political legitimacy while exploiting technology and the state’s coercive powers to maintain internal political control. But this new era was jumpstarted by the world financial crisis of 2007, which revealed the bankruptcy of unregulated market capitalism, weakened faith in US leadership, exacerbated economic deprivation and inequality around the world, ignited growing populism, and undermined international liberal institutions. The skewed distribution of wealth experienced in most developed countries, politically tolerated in periods of growth, became intolerable as growth rates declined. A combination of aging populations, accelerating technology, and global populism/nationalism promises to make this growth decline very difficult to reverse. What Larry Summers and other international political economists have come to call “secular stagnation” increases the likelihood that illiberal globalization, multipolarity, and rising nationalism will define our future. Summers11 has argued that the world is entering a long period of diminishing economic growth. He suggests that secular stagnation “may be the defining macroeconomic challenge of our times.” Julius Probst, in his recent assessment of Summers’ ideas, explains:

…rich countries are ageing as birth rates decline and people live longer. This has pushed down real interest rates because investors think these trends will mean they will make lower returns from investing in future, making them more willing to accept a lower return on government debt as a result.

Other factors that make investors similarly pessimistic include rising global inequality and the slowdown in productivity growth…

This decline in real interest rates matters because economists believe that to overcome an economic downturn, a central bank must drive down the real interest rate to a certain level to encourage more spending and investment… Because real interest rates are so low, Summers and his supporters believe that the rate required to reach full employment is so far into negative territory that it is effectively impossible.

…in the long run, more immigration might be a vital part of curing secular stagnation. Summers also heavily prescribes increased government spending, arguing that it might actually be more prudent than cutting back – especially if the money is spent on infrastructure, education and research and development.

Of course, governments in Europe and the US are instead trying to shut their doors to migrants. And austerity policies have taken their toll on infrastructure and public research. This looks set to ensure that the next recession will be particularly nasty when it comes… Unless governments change course radically, we could be in for a sobering period ahead.12

The rise of nationalism/populism is both cause and effect of this economic outlook. Lower growth will make every aspect of the liberal order more difficult to resuscitate post-Trump. Domestic politics will become more polarized and dysfunctional, as competition for diminishing resources intensifies. International collaboration, ad hoc or through institutions, will become politically toxic. Protectionism, in its multiple forms, will make economic recovery from “secular stagnation” a heavy lift, and the liberal hegemonic leadership and strong institutions that limited the damage of previous downturns, will be unavailable. A clear demonstration of this negative feedback loop is the economic damage being inflicted on the world by Trump’s trade war with China, which— despite the so-called phase one agreement—has predictably escalated from negotiating tactic to imbedded reality, with no end in sight. In a world already suffering from inadequate investment, the uncertainties generated by this confrontation will further curb the investments essential for future growth. Another demonstration of the intersection of structural forces is how populist-motivated controls on immigration (always a weakness in the hyper-globalization narrative) deprives developed countries of Summers’ recommended policy response to secular stagnation, which in a more open world would be a win-win for rich and poor countries alike, increasing wage rates and remittance revenues for the developing countries, replenishing the labor supply for rich countries experiencing low birth rates.

Illiberal Globalization

Economic weakness and rising nationalism (along with multipolarity) will not end globalization, but will profoundly alter its character and greatly reduce its economic and political benefits. Liberal global institutions, under American hegemony, have served multiple purposes, enabling states to improve the quality of international relations and more fully satisfy the needs of their citizens, and provide companies with the legal and institutional stability necessary to manage the inherent risks of global investment. But under present and future conditions these institutions will become the battlegrounds—and the victims—of geopolitical competition. The Trump Administration’s frontal attack on multilateralism is but the final nail in the coffin of the Bretton Woods system in trade and finance, which has been in slow but accelerating decline since the end of the Cold War. Future American leadership may embrace renewed collaboration in global trade and finance, macroeconomic management, environmental sustainability and the like, but repairing the damage requires the heroic assumption that America’s own identity has not been fundamentally altered by the Trump era (four years or eight matters here), and by the internal and global forces that enabled his rise. The fact will remain that a sizeable portion of the American electorate, and a monolithically pro- Trump Republican Party, is committed to an illiberal future. And even if the effects are transitory, the causes of weakening global collaboration are structural, not subject to the efforts of some hypothetical future US liberal leadership. It is clear that the US has lost respect among its rivals, and trust among its allies. While its economic and military capacity is still greatly superior to all others, its political dysfunction has diminished its ability to convert this wealth into effective power.13 It will furthermore operate in a future system of diffusing material power, diverging economic and political governance approaches, and rising nationalism. Trump has promoted these forces, but did not invent them, and future US Administrations will struggle to cope with them.

What will illiberal globalization look like? Consider recent events. The instruments of globalization have been weaponized by strong states in pursuit of their geopolitical objectives. This has turned the liberal argument on behalf of globalization on its head. Instead of interdependence as an unstoppable force pushing states toward collaboration and convergence around market-friendly domestic policies, states are exploiting interdependence to inflict harm on their adversaries, and even on their allies. The increasing interaction across national boundaries that globalization entails, now produces not harmonization and cooperation, but friction and escalating trade and investment disputes.14 The Trump Administration is in the lead here, but it is not alone. Trade and investment friction with China is the most obvious and damaging example, precipitated by China’s long failure to conform to the World Trade Organization (WTO) principles, now escalated by President Trump into a trade and currency war disturbingly reminiscent of the 1930s that Bretton Woods was designed to prevent. Financial sanctions against Iran, in violation of US obligations in the Joint Comprehensive Plan Of Action (JCPOA), is another example of the rule of law succumbing to geopolitical competition. Though more mercantilist in intent than geopolitical, US tariffs on steel and aluminum, and their threatened use in automotives, aimed at the EU, Canada, and Japan,15 are equally destructive of the liberal system and of future economic growth, imposed as they are by the author of that system, and will spread to others. And indeed, Japan has used export controls in its escalating conflict with South Korea16 (as did China in imposing controls on rare earth,17 and as the US has done as part of its trade war with China). Inward foreign direct investment restrictions are spreading. The vitality of the WTO is being sapped by its inability to complete the Doha Round, by the proliferation of bilateral and regional agreements, and now by the Trump Administration’s hold on appointments to WTO judicial panels. It should not surprise anyone if, during a second term, Trump formally withdrew the US from the WTO. At a minimum it will become a “dead letter regime.”18

As such measures gain traction, it will become clear to states—and to companies—that a global trading system more responsive to raw power than to law entails escalating risk and diminishing benefits. This will be the end of economic globalization, and its many benefits, as we know it. It represents nothing less than the subordination of economic globalization, a system which many thought obeyed its own logic, to an international politics of zero-sum power competition among multiple actors with divergent interests and values. The costs will be significant: Bloomberg Economics estimates that the cost in lost US GDP in 2019- dollar terms from the trade war with China has reached $134 billion to date and will rise to a total of $316 billion by the end of 2020.19 Economically, the just-in-time, maximally efficient world of global supply chains, driving down costs, incentivizing innovation, spreading investment, integrating new countries and populations into the global system, is being Balkanized. Bilateral and regional deals are proliferating, while global, nondiscriminatory trade agreements are at an end.

Economies of scale will shrink, incentivizing less investment, increasing costs and prices, compromising growth, marginalizing countries whose growth and poverty reduction depended on participation in global supply chains. A world already suffering from excess savings (in the corporate sector, among mostly Asian countries) will respond to heightened risk and uncertainty with further retrenchment. The problem is perfectly captured by Tim Boyle, CEO of Columbia Sportswear, whose supply chain runs through China, reacting to yet another ratcheting up of US tariffs on Chinese imports, most recently on consumer goods:

We move stuff around to take advantage of inexpensive labor. That’s why we’re in Bangladesh. That’s why we’re looking at Africa. We’re putting investment capital to work, to get a return for our shareholders. So, when we make a wager on investment, this is not Vegas. We have to have a reasonable expectation we can get a return. That’s predicated on the rule of law: where can we expect the laws to be enforced, and for the foreseeable future, the rules will be in place? That’s what America used to be.20

The international political effects will be equally damaging. The four structural forces act on each other to produce the more dangerous, less prosperous world projected here. Illiberal globalization represents geopolitical conflict by (at first) physically non-kinetic means. It arises from intensifying competition among powerful states with divergent interests and identities, but in its effects drives down growth and fuels increased nationalism/populism, which further contributes to conflict. Twenty-first-century protectionism represents bottom-up forces arising from economic disruption. But it is also a top-down phenomenon, representing a strategic effort by political leadership to reduce the constraints of interdependence on freedom of geopolitical action, in effect a precursor and enabler of war. This is the disturbing hypothesis of Daniel Drezner, argued in an important May 2019 piece in Reason, titled “Will Today’s Global Trade Wars Lead to World War Three,”21 which examines the pre- World War I period of heightened trade conflict, its contribution to the disaster that followed, and its parallels to the present:

Before the First World War started, powers great and small took a variety of steps to thwart the globalization of the 19th century. Each of these steps made it easier for the key combatants to conceive of a general war. We are beginning to see a similar approach to the globalization of the 21st century. One by one, the economic constraints on military aggression are eroding. And too many have forgotten—or never knew—how this played out a century ago.

…In many ways, 19th century globalization was a victim of its own success. Reduced tariffs and transport costs flooded Europe with inexpensive grains from Russia and the United States. The incomes of landowners in these countries suffered a serious hit, and the Long Depression that ran from 1873 until 1896 generated pressure on European governments to protect against cheap imports.

…The primary lesson to draw from the years before 1914 is not that economic interdependence was a weak constraint on military conflict. It is that, even in a globalized economy, governments can take protectionist actions to reduce their interdependence in anticipation of future wars. In retrospect, the 30 years of tariff hikes, trade wars, and currency conflicts that preceded 1914 were harbingers of the devastation to come. European governments did not necessarily want to ignite a war among the great powers. By reducing their interdependence, however, they made that option conceivable.

…the backlash to globalization that preceded the Great War seems to be reprised in the current moment. Indeed, there are ways in which the current moment is scarier than the pre-1914 era. Back then, the world’s hegemon, the United Kingdom, acted as a brake on economic closure. In 2019, the United States is the protectionist with its foot on the accelerator. The constraints of Sino-American interdependence—what economist Larry Summers once called “the financial balance of terror”—no longer look so binding. And there are far too many hot spots—the Korean peninsula, the South China Sea, Taiwan—where the kindling seems awfully dry.

#### Econ decline doesn’t cause war – increases cooperation

Clary, 15 (Christopher Clary, PhD in political science from MIT, MA in national security affairs, postdoctoral fellow, Watson Institute for International Studies, Brown University, “Economic Stress and International Cooperation: Evidence from International Rivalries”, MIT political science department, 4/25/15, https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2597712)

Do economic downturns generate pressure for diversionary conflict? Or might downturns encourage austerity and economizing behavior in foreign policy? This paper provides new evidence that economic stress is associated with conciliatory policies between strategic rivals. For states that view each other as military threats, the biggest step possible toward bilateral cooperation is to terminate the rivalry by taking political steps to manage the competition. Drawing on data from 109 distinct rival dyads since 1950, 67 of which terminated, the evidence suggests rivalries were approximately twice as likely to terminate during economic downturns than they were during periods of economic normalcy. This is true controlling for all of the main alternative explanations for peaceful relations between foes (democratic status, nuclear weapons possession, capability imbalance, common enemies, and international systemic changes), as well as many other possible confounding variables. This research questions existing theories claiming that economic downturns are associated with diversionary war, and instead argues that in certain circumstances peace may result from economic troubles. I define a rivalry as the perception by national elites of two states that the other state possesses conflicting interests and presents a military threat of sufficient severity that future military conflict is likely. Rivalry termination is the transition from a state of rivalry to one where conflicts of interest are not viewed as being so severe as to provoke interstate conflict and/or where a mutual recognition of the imbalance in military capabilities makes conflict-causing bargaining failures unlikely. In other words, rivalries terminate when the elites assess that the risks of military conflict between rivals has been reduced dramatically. This definition draws on a growing quantitative literature most closely associated with the research programs of William Thompson, J. Joseph Hewitt, and James P. Klein, Gary Goertz, and Paul F. Diehl.1 My definition conforms to that of William Thompson. In work with Karen Rasler, they define rivalries as situations in which “[b]oth actors view each other as a significant politicalmilitary threat and, therefore, an enemy.”2 In other work, Thompson writing with Michael Colaresi, explains further: The presumption is that decisionmakers explicitly identify who they think are their foreign enemies. They orient their military preparations and foreign policies toward meeting their threats. They assure their constituents that they will not let their adversaries take advantage. Usually, these activities are done in public. Hence, we should be able to follow the explicit cues in decisionmaker utterances and writings, as well as in the descriptive political histories written about the foreign policies of specific countries.3 Drawing from available records and histories, Thompson and David Dreyer have generated a universe of strategic rivalries from 1494 to 2010 that serves as the basis for this project’s empirical analysis.4 This project measures rivalry termination as occurring on the last year that Thompson and Dreyer record the existence of a rivalry. Economic crises lead to conciliatory behavior through five primary channels. (1) Economic crises lead to austerity pressures, which in turn incent leaders to search for ways to cut defense expenditures. (2) Economic crises also encourage strategic reassessment, so that leaders can argue to their peers and their publics that defense spending can be arrested without endangering the state. This can lead to threat deflation, where elites attempt to downplay the seriousness of the threat posed by a former rival. (3) If a state faces multiple threats, economic crises provoke elites to consider threat prioritization, a process that is postponed during periods of economic normalcy. (4) Economic crises increase the political and economic benefit from international economic cooperation. Leaders seek foreign aid, enhanced trade, and increased investment from abroad during periods of economic trouble. This search is made easier if tensions are reduced with historic rivals. (5) Finally, during crises, elites are more prone to select leaders who are perceived as capable of resolving economic difficulties, permitting the emergence of leaders who hold heterodox foreign policy views. Collectively, these mechanisms make it much more likely that a leader will prefer conciliatory policies compared to during periods of economic normalcy. This section reviews this causal logic in greater detail, while also providing historical examples that these mechanisms recur in practice. Economic Crisis Leads to Austerity Economic crises generate pressure for austerity. Government revenues are a function of national economic production, so that when production diminishes through recession, revenues available for expenditure also diminish. Planning almost invariably assumes growth rather than contraction, so the deviation in available revenues compared to the planned expenditure can be sizable. When growth slowdowns are prolonged, the cumulative departure from planning targets can grow even further, even if no single quarter meets the technical definition of recession. Pressures for austerity are felt most acutely in governments that face difficulty borrowing to finance deficit expenditures. This is especially the case when this borrowing relies on international sources of credit. Even for states that can borrow, however, intellectual attachment to balanced budgets as a means to restore confidence—a belief in what is sometimes called “expansionary austerity”—generates incentives to curtail expenditure. These incentives to cut occur precisely when populations are experiencing economic hardship, making reductions especially painful that target poverty alleviation, welfare programs, or economic subsidies. As a result, mass and elite constituents strongly resist such cuts. Welfare programs and other forms of public spending may be especially susceptible to a policy “ratchet effect,” where people are very reluctant to forego benefits once they have become accustomed to their availability.6 As Paul Pierson has argued, “The politics [of welfare state] retrenchment is typically treacherous, because it imposes tangible losses on concentrated groups of voters in return for diffuse and uncertain gains.”7 Austerity Leads to Cutbacks in Defense Spending At a minimum, the political costs of pursuing austerity through cutbacks in social and economic expenditures alone make such a path unappealing. In practice, this can spur policymakers to curtail national security spending as a way to balance budgets during periods of economic turmoil. There is often more discretion over defense spending than over other areas in the budget, and it is frequently distantly connected to the welfare of the mass public. Many militaries need foreign arms and foreign ammunition for their militaries, so defense expenditures are doubly costly since they both take up valuable defense budget space while also sending hard currency overseas, rather than constituencies at home. Pursuing defense cuts may also conform to the preferences of the financial sector, which shows a strong aversion to military conflict even if that means policies of appeasement and conciliation.8 During periods of economic expansion, the opportunity costs associated with defense expenditure—the requirement for higher taxes or foregone spending in other areas—are real but acceptable. Economic contraction heightens the opportunity costs by forcing a choice between different types of spending. There is a constituency for defense spending in the armed services, intelligence agencies, and arms industries, but even in militarized economies this constituency tends to be numerically much smaller than those that favor social and economic expenditures over military ones. Defense Cutbacks Encourage Rapprochement An interest in defense cutbacks can lead to conciliatory behavior through two paths. First, the cutbacks themselves serve as a concrete signal to adversaries that the military threat posed by the economically distressed state is declining. This permits the other state to halt that portion of defense spending dedicated to keeping up, breaking the back of ongoing arms races through reciprocated, but non-negotiated moves. Unilateral conventional force reductions were a major element of Gorbachev’s foreign policy in the late 1980s, alongside negotiated strategic arms control, and diplomatic efforts to achieve political understandings with the United States.9 Gorbachev similarly used force reductions in Afghanistan, Mongolia, and the Soviet Far East to signal to China in 1987 that he was serious about political negotiations.10 Elsewhere, non-negotiated, tit-for-tat military redeployments facilitated Argentina-Brazil rapprochement.11 Second, leaders may believe cutbacks are necessary, but would be dangerous in the absence of negotiated improvements with traditional foes. Economic downturns can serve as motivation to pursue arms control or political settlement. During periods of normalcy, such outcomes would be positives, but are viewed as “too hard” by political leaders that move from one urgent problem to the next. During periods of economic crisis, however, arms control or political improvements might allow for much needed cuts in defense spending, and are pursued with greater vigor. The Johnson administration attempted both unilateral and negotiated arms limitations because of budgetary concerns as President Johnson and Secretary McNamara struggled to pay for the “Great Society” domestic programs and the increasingly costly Vietnam War. They first attempted unilateral “caps” on costly nuclear forces and anti-ballistic missile defenses and when this failed to lead to a reciprocal Soviet response they engaged in formal arms control talks. Détente continued in the Nixon administration, accelerating in 1971 and 1972, simultaneous with rising budget deficits and inflation so serious that Nixon instituted price controls. Nixon’s decision to sharply limit anti-ballistic missile defenses to enable arms control talks was contrary to his strategic views, but necessitated by a difficult budgetary environment that made paying for more missile defense emplacements unrealistic.12 As Nixon told his national security advisor Kissinger in an April 1972 discussion of ballistic missile and anti-ballistic missile developments: “You know we've got a hell of a budget problem. We've got to cut it down, we've got to cut 5 billion dollars off next year's defense budget. So, I don't want to [inaudible: do it?] unless we've got some settlement with the Russians.”13 In practice, unilateral defense cuts and force reductions are frequently combined with negotiated political agreements in a sequential, iterative fashion, where a unilateral reduction will signal seriousness that opens the way for political agreement, which in turn permits even deeper reductions. Defense cuts and force reductions are not only a means to achieve rivalry termination, but also a goal in and of themselves that rivalry termination helps secure. Leaders are seeking resources from defense they can use elsewhere. Thus when Argentine leader Raul Alfonsín campaigned for the need for drastic budgetary austerity, his specific “platform was the reduction of military spending to use it for the other ministries, connected with the concept of eliminating the hypothesis of conflict” with Argentinian rivals, according to Adalberto Rodríguez Giavarini, who served in Alfonsín’s ministry of defense (and later was Argentina’s foreign minister).14 Similarly, Gorbachev was motivated to reduce arms in the late 1980s because he determined it was necessary to cut Soviet defense spending and defense production, and repurpose part of the defense industry to make consumer and civilian capital goods, according to contemporary U.S. Central Intelligence Agency classified assessments.15 Thus the “main reason” why strategic arms control breakthroughs occurred from 1986 to 1988 and the Soviet Afghan intervention concluded in 1989 was a realization within the Politburo of “excessively high expenditures on defense,” according to Nikolai Ryzhkov, Gorbachev’s prime minister.16 Economic Downturns Provoke Strategic Reassessment: Threat Deflation and Prioritization Economic downturns encourage leaders to seek new ideas to use to frame their policy problems. During periods of economic difficulty, elites can come to realize that their problems are not amenable to old solutions, and search for new ideas.17 During an economic crisis, politics and policy are “more fluid,” as old answers seem stale and insufficient.18 An ideational entrepreneur that can link economic lemons to foreign policy lemonade can find a patron when leaders are casting about for ways to reframe the world in acceptable ways to their peers and publics. The behavior of an old foe is often ambiguous, and can be viewed as either injurious to one’s interests or neutral toward them. During periods of normalcy, the motivation of defense establishments is tilted toward threat and danger. During periods of economic crisis, national leaders have a counteracting motivation to downplay such dangers, so that the threats faced by a nation are manageable through available resources. Economic difficulties provide a motivation for leaders to view equivocal signals from the international system in a way that is benign. To the extent that rivalries are perpetuated because of threat inflation, economic downturns provide incentives to deflate the threat, potentially disrupting cycles of competition and enmity. South Korean president Kim Dae-jong came to power in the aftermath of the 1998 Asian economic crisis, pursued a “sunshine policy” toward the North, cut South Korean defense spending in nominal and real terms, and pursued a policy toward North Korea that political scientist Dong Sun Lee called “threat deflation” despite the growing North Korean nuclear weapons threat.19 Economic crises can also spur strategic reassessment through another channel. If leaders view economic problems as structural, rather than a temporary gale, they may come to question whether available national resources are sufficient to confront all of the national threats identified in the past. This creates incentives to economize threats, seeking political settlements where possible in order to focus remaining resources on competitions that can be won. A concrete example: in 1904, the chancellor to the Exchequer wrote his cabinet colleagues: “[W]e must frankly admit that the financial resources of the United Kingdom are inadequate to do all that we should desire in the matter of Imperial defense.”20 The result was a British decision to minimize political disagreement with the United States and focus on other defense challenges. While such a decision is in line with realist advice, it occurred not when the power trajectories were evident to British decisionmakers but when the budget situation had reached a crisis that could no longer be ignored. Economic Downturns Increase Incentives for International Economic Cooperation Economic downturns not only create incentives to cut spending, they encourage vigorous pursuit of opportunities for economic cooperation. This, too, can engender conciliatory behavior. Economic downturns can increase motives to pursue trade and investment. Rivalries with old foes often directly impinge on trade and investment with the adversary and may indirectly impinge on trade and investment with third parties, especially if the rivalry is viewed as being likely to generate disruptive military conflict. Additionally, economic aid is sometimes used as an inducement for adversaries to set aside a political dispute. This aid can either serve as a side payment from one rival to another, or it can be offered by a third party to one or both rivals as an incentive to set aside lingering disputes. Such aid is more attractive during periods of economic turmoil than during periods of comparative normalcy. In South Asia, India and Pakistan struggled from 1947 to 1960 with how to manage water resources in the Indus Rivers basin, inheriting a canal system meant to service pre-partitioned India. Pakistan, suffering an economic downturn, and India, reliant on foreign aid to avert economic crisis, agreed to an Indus Waters Treaty in 1960 to resolve the lingering dispute, made possible in substantial part because of World Bank financing that was especially attractive to the struggling economies. In the Middle East, Egypt and Israel made the hard choices necessary for the Camp David accord in 1979 precisely because the Sadat and Begin governments faced difficult economic situations at home that made the U.S. aid guarantee in exchange for a peace agreement especially attractive.21 In 1982, the Yemen’s People’s Republic agreed to stop its attempts to destabilize Oman, because otherwise Yemen would not receive economic assistance from Arab oil producing states that it desperately needed.22 In the late 1990s, El Niño-induced flooding devastated Ecuador and Peru, spurring reconciliation as leaders sought to increase trade, secure investment, and slash military expenditures so they could be used at home.23 As one Western diplomat assessed at the time, Ecuador and Peru “have decided it's better to see reason…. They see foreign companies eager to invest in South America, and if Peru and Ecuador are in conflict, it makes them less attractive than, say, Argentina or Brazil or Chile for investment purposes. That's the last thing either country wants.”24 Economic Downturns Can Cause Meaningful Leadership Change The above mechanisms have identified how economic difficulties can alter the preferences of an incumbent leader. Additionally, economic crises can lead to leadership turnover and, during periods of difficulty, the selection process that determines new leadership can loosen ideological strictures that relate to extant rivalries. Leaders may be selected based on judgments about their ability to cope with economic problems, with greater elite acceptance of ideological heterogeneity in foreign policy beliefs than in periods of normalcy.25 In Stephen Brooks and William Wohlforth’s words, “If everything is going well or is stable, then why select leaders who might subvert the triedand-true identity? But if that identity is leading to increased material difficulties, pressure for change will likely mount. In these circumstances, those who are willing to alter or adjust the hallowed precepts of the existing identity and its associated practices are more likely to assume power.”26 Economic crisis, then, can spur incumbent leaders to either abandon the “baggage” of rivalry or facilitate the selection of new leaders that do not carry such baggage. The most well-known example of an incumbent selectorate looking for a reformer, even one without much foreign policy experience, involves Mikhail Gorbachev’s ascension to the Soviet premiership. In political scientist Jerry Hough’s words, “If the rate of economic growth continued to decline, if administrative and labor efficiency continued to fall, if corruption was not punished, these conditions would have dangerous consequences for the [Soviet Union in the] 1980s and 1990s…. Gorbachev’s promotion was an answer to these concerns.”27

#### Growth usustainable causes climate change and biosphere collapse --- decoupling is impossible only degrowth solves

Parrique, 22 (Timothée Parrique, Timothée Parrique is a researcher at the School of Economics in Lund University, Sweden. Titled “The political economy of degrowth” (2019), his PhD dissertation explores the economic implications of the idea of degrowth, “A response to Noah Smith: Is degrowth bad economics?”, illumine, 1-13-22, <https://illuminem.com/energyvoices/54d95ab5-7d34-4f3f-9b16-9cd10b29d29c)//babcii>

Reality check about green growth

Noah Smith writes that “in the past, GDP and resources use have always been tightly correlated. But this is just drawing a line through some data – it’s not based on any deep theory.” Let’s start here: the line has been drawn many times – **1,157 times** according to the [systematic review of the decoupling literature](https://iopscience.iop.org/article/10.1088/1748-9326/ab842a) conducted by Helmut Haberl and fifteen colleagues in June 2020. Findings: “we conclude that large rapid absolute reductions of resource use and GHG emissions cannot be achieved through observed decoupling rates.” Regardless of your theory and whether you think it is deep or not, this result is the most solid empirical fact we have: GDP and environmental pressures have until now always been tightly coupled.

So, the author is mistaken when he writes that “currently, rich countries are increasing their GDP while decreasing their resource consumption.” First, the focus on resource consumption is too narrow. A “sustainable” economy in any meaningful understanding of the term must consider all the complex interactions it has with ecosystems, and not only carbon. The CO2 cases of decoupling are ambiguous and worth debating (I’ll get to that in a second), but the decouplings of other forms of environmental pressures are more difficult to assess because they’re hardly studied ([80% of all decoupling studies](https://iopscience.iop.org/article/10.1088/1748-9326/ab842a) only focus on either primary energy or CO2emissions). What we do know is that the state of ecosystems is worsening at an increasing pace, with [all measures of environmental degradations on the rise](https://www.nature.com/articles/s41893-021-00799-z).

But let’s talk about carbon for a bit. Have we managed to decarbonise growth? Answer: not really. Don’t take my word for it, read the actual [study](https://www.nature.com/articles/s41558-019-0419-7) that green growth advocates brandish as proof that decoupling is underway. What it really shows is that only 18 countries in the world (not many) have managed to reduce (the cut is minuscule) their CO2 emissions (only one environmental pressures among many others) between 2005 and 2015 (a rather small period of time), with part of that decrease being explained by a slowdown in GDP growth rates (for a longer analysis of this study: [Is green growth happening?](https://unevenearth.org/2021/04/is-green-growth-happening/)). This is not green growth, this is a-tiny-bit-kind-of-greener-than-before growth – nothing worth sabering champagne.

Let’s look at a more recent study from last week: “[Countries with sustained greenhouse gas emissions reductions](https://www.tandfonline.com/doi/full/10.1080/14693062.2021.1990831).” The abstract announces triumphant findings: “24 countries have sustained reductions in annual CO2 and GHG [greenhouse gases] emissions between 1970 and 2018.” One might say that 24 is better than 18, but out of these, only six – Sweden (-1.5% per year), Germany (-1.1%), UK (-0.9%), France (-0.8%), North Macedonia (-0.5%), and Belgium (-0.4%) – have experienced a continuous period of emissions reductions since the 1970s. First, that’s not many. Second, do you notice anything about these numbers? Well, they’re small. Very small. Too small to achieve any of the Paris Agreement warming targets, as the authors point out (and I find their targets quite optimist because they assume that we’ll find a way to remove significant volumes of carbon from the atmosphere). Take away assumptions about these [– as of now inexistent – Negative Emission Technologies](https://smartstones.nl/wp-content/uploads/2016/12/Kevin-Anderson-2016.10.13-the-Trouble-with-Negative-Emissions-Science-2016.pdf), and acknowledge the differentiated responsibilities of the global North towards climate change, and you realise that the needed yearly cuts are even more daunting, in the range of [10-15%.](https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1728209)​

Noah Smith’s optimism is not only scientifically unwarranted, it is also dangerous. Imagine someone who would say in the midst of a pandemic that “currently, rich countries are decreasing the number of positive cases,” but then you discover that: (a) the statement only concerns a small, unrepresentative demographic, not all rich countries but only a handful of them, (b) that it only concerns one type of disease and ignore all others, (c) that the “currently” may have meant just a few days, when trends were worsening the rest of the time, and that (d) the rates of decrease of positive cases is marginal. This statement is reassuring but dangerously so because it assumes we’re somehow going in the right direction at the right pace – we’re not.

In fact, this statement is largely false. I say “largely” because it can become true, but only by being extremely vague, like the convoluted, legally jargoned sentences of tobacco lobbyists who would write that “smoking may, under certain specific and not generalisable circumstances, cause varying levels of damage to health.” **We know this is bullshit**. This is why we now write on cigarette packs that smoking kills. I think that the same should apply to decoupling. Let’s stop saying that “well, maybe, sometime, if this, if that, we may be able to achieve certain degrees of decoupling that might, to some extent, make growth more ecologically sustainable,” and let’s face an inconvenient truth: the growth of rich countries is not sustainable and will probably never be.

Who’s got the best theory?

It is time to admit that green growth optimists are losing the number game and that the burden of proof is now on their side. If you want to show that growth can be greened (or that wealth trickles down, or that Earth is flat), it’s on you. Waiting for that, there is another game we can play, one about theory. According to Noah Smith, saying that “GDP and resource use have always been tightly correlated” is “not based on any deep theory.” This reminds me of the old joke where an economist says to a physicist: “sure it works in practice but does it work in theory?” Reality tells us that growth is not green, but that means nothing, because in some simplistic, Sims-like economic model, it can be green. But here is the catch: [most economic models](https://www.tandfonline.com/doi/full/10.1080/14747731.2020.1807856) keep nature out of their production functions, and so, of course, in theory, an economy can grow forever without impacting nature.

What do the growth-sceptics have to offer against this theory? Let me introduce Romanian-American mathematician and economist Nicholas Georgescu-Roegen (1906-1994) who, at the beginning of the 1970s, has laid out one theory so disruptive that it led to the creation of new school of economic thought: ecological economics. His main idea, exposed in The Entropy Law and the Economic Process (1971), was that economic organisation is a continuation of biological organisation. Why? Because all machines are necessarily made of materials and use energy, and because all labour involves our biological bodies, which are also made of materials and use energy. The economy is – unavoidably – a bioeconomy, which means it is a subsystem of the larger finite and nongrowing ecosystem that is the Earth.

The logical conclusion becomes inevitable: nature holds non-negotiable market power and humans can only use whatever nature supplies. This also means that the prosperity of the economy is fundamentally linked to the one of ecology. In the same way that a healthy organ cannot thrive for long in a dying body, an economy will not prosper within a collapsing biosphere (or at least not for long). In terms of manufacturing, this means that certain factors of production are non-substitutable. Any human-made artefact is necessarily made out of natural resources such as materials and energy and so therefore cannot be a true substitute to it. “One cannot build the same wooden house with half the timber no matter how many saws and carpenters one tries to substitutes,” wrote [Herman Daly](https://books.google.fr/books/about/Beyond_Growth.html?id=FnGH53-BGIQC&redir_esc=y) (another economist who has laid out [a deep theory](https://www.routledge.com/Herman-Dalys-Economics-for-a-Full-World-His-Life-and-Ideas/Victor/p/book/9780367556952) to explain why infinite growth is an ecological impossibility). Regardless of how ingenious you are and the budget of your R&D department, you will not be able to build a wooden house without wood.

If all economic activities require energy and materials, it means **economic practices are unavoidably entropic** (the second law of thermodynamics), which means they neither create nor destroy matter or energy but only transform it from a higher to a lower quality. Consider this an unescapable law of diminishing returns applied to the economy as a whole. You can produce more for a time, and produce more efficiently to be able to keep producing for a longer period of time, but you cannot keep increasing production forever. This is because all of the materials and energy we use come from a nature that is fundamentally finite in its ability to provide resources and assimilate waste.

#### Warming causes extinction.

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

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

#### Protracted economic crisis forces change in social, cultural, and institutional predispositions to growth

Crownshaw et al. 18 (Timothy Crownshaw, Department of Natural Resource Sciences, McGill University, Canada, Caitlin Morgan, Food Systems Graduate Program, University of Vermont, USA, [Alison Adams](https://journals.sagepub.com/action/doSearch?target=default&ContribAuthorStored=Adams%2C+Alison), Rubenstein School of the Environment, University of Vermont, USA, Martin Sers, Faculty of Environmental Studies, York University, Canada, Natália Britto dos Santos, Faculty of Environmental Studies, York University, Canada, Alice Damiano, Department of Natural Resource Sciences, McGill University, Canada, Laura Gilbert, Department of Natural Resource Sciences, McGill University, Canada, Gabriel Yahya Haage, Department of Natural Resource Sciences, McGill University, Canada, Daniel Horen Greenford, Department of Geography, Planning and Environment, Concordia University, Canada, “Over the horizon: Exploring the conditions of a post-growth world”, The Anthropocene Review, December 25, 2018, https://journals.sagepub.com/doi/10.1177/2053019618820350)//babcii

Framing the post-growth context As described by Krausmann et al. (2008) and Haberl et al. (2011), for many contemporary societies the end of growth and transition to a sustainable paradigm represents a permanent and fundamental transformation of their socio-metabolic regime, or stable pattern of metabolic activity representing a specific societal configuration. Given the magnitude and complexity of this transformation, prevalent assumptions accumulated during the era of the industrial socio-metabolic regime are of little use and a new foundation for discussion must be advanced. To this end, we outline below several high-level premises congruent with a future shaped by biophysical limits and the end of growth regarding (1) the initiation of the post-growth period, (2) politics, (3) poverty, (4) population, (5) technological capital, (6) macroeconomic conditions, and (7) conflict. These premises are outlined here for clarity and transparency, and aim to provide a credible high-level point of departure for subsequent analysis: 1. To date, heterodox economic narratives appear incapable of supplanting the current growthbased economic consensus through incremental change, and their acceptance may instead depend on the mass disruption of a major economic crisis (Kallis et al., 2018; Schneider et al., 2010). Describing the political economy of degrowth, Strunz and Schindler (2018) note potentially severe barriers to a voluntary abandonment of growth relating to conflicts of interest between diverse groups, the net effect of which serves to favor the status quo. However, as limits begin to manifest, the growth-based economic model will ultimately face de-legitimization and subsequent paradigm change, likely followed by a period of social and economic instability (Kallis et al., 2012; Klitgaard and Krall, 2012). Protracted crisis will force a reformation of fundamental governance and educational institutions needed to generate new economic systems not dependent on perpetual growth. As such, the post-growth period is unlikely to originate from proactive government policy and will instead be an emerging reality which manifests in an involuntary and unplanned manner (Bonaiuti, 2017; Rees, 2015; Sorman and Giampietro, 2013). 2. Societies in contraction will inevitably face profound political disruptions and shifts in cultural and institutional norms. The entwined economic, social, and ecological pressures of the post-growth period may cause a movement away from liberal democracies toward more authoritarian forms of government better positioned to respond to emerging crises (Beeson, 2010; Heinberg and Crownshaw, 2018; Shearman and Smith, 2007). Quilley (2013) supports this view, noting that liberal social norms represent a form of social-institutional complexity which is unlikely to survive the transition to a smaller scale, low-energy society. While this shift in governance structures will clearly exhibit a powerful influence on the socio-political context in which post-growth challenges must be addressed, it is not deterministic in nature and will be complicated by a wide range of contested narratives and interests emerging from nation states, international organizations, corporations, and other non-state actors. Agency to shift the course of evolution of socio-ecological systems will be limited in effect, at all scales and for all actors, by the unfolding biophysical and social constraints associated with contraction of the metabolic pattern of societies. Although a considerable range of avenues for effective action remains, the inexorability of biophysical constraints implies that the political process will be forced to respond to, rather than proactively alleviate, many aspects of economic contraction. Understanding and anticipating these limits will improve the likelihood of successful post-growth adaptation

### Advantage 2

#### No Latin American governance

Perina ’16 [Rubén M.; June; former Organization of American States (OAS) official, teaches at Georgetown University and George Washington University; Brookings Institute, “The Inter-American Democratic Charter: An Assessment and Ways to Strengthen It,” <https://www.brookings.edu/wp-content/uploads/2016/06/07-inter-american-charter-perina.pdf>; KP]

Presidents Correa, Morales and Chávez have taken lately to strongly criticizing the performance and decisions of the IACHR and the Inter-American Court of Human Rights, the pillars of the Inter-American Human Rights system, along with the Inter-American Convention on Human Rights of 1969. Their main argument is that they are instruments of U.S. imperialism or manipulated by the State Department. As recently as May 3, 2012, Venezuelan Foreign Minister Nicolás Maduro, at a UNASUR meeting of Foreign Ministers in Colombia, echoed this position, declaring that “it is time to dismantle this decadent Court and Commission because they intervene in our internal judicial affairs.” President Correa has recently commented that the OAS and the IACHR are “totally dominated by the influence of the United States and they have only served the foreign policy interest of that country.” (Telesur, May 9, 2012.) The fact is, however, the Commission has issued reports demanding that the U.S. government adopt urgent measures to have a competent tribunal to try the Guantanamo prisoners accused of terrorism, has held public hearings on the subject, and has asked the U.S. government to close the prisoners’ camp. Similarly, the IACHR has strongly criticized the U.S. government’s detention practices of illegal immigrants. Paradoxically, the criticism and attacks against the Commission and the Court, and the OAS in general, is similar to complaints by U.S. legislators and some high-ranking State Department officials who think the OAS is useless because it is dominated by anti-American populist governments. Others see U.S. passivity and disinterest in the organization and the region as beginning after Latin America rejected the U.S. proposal for a free trade zone for the Americas in Mar del Plata, Argentina, in 2006. Anyone who has studied or observed the functioning of these inter-American institutions, or has served in them, knows full well that U.S. dominance is no longer operative, as might have been during the Cold War years. The reasons are many, but the fact is that the U.S. government can no longer impose its will in these bodies, just as it cannot do so in its bilateral relations with Latin American countries (although perhaps with a few exceptions). We are in a different era of inter-American relations. To pretend or claim otherwise is to ignore this new reality. And one may suspect that governments that make such denunciations are using them as smokescreens to cover their own violations of human rights and the democratic principles, values and practices established in the IADC. Strangely enough, though, Argentina—a country whose people have greatly benefitted from the Commission and the Court’s defense of human rights, and whose democratic governments have always praised them—has remained silent and has not come publicly to the defense of the system.

#### No crime impact AND coop’s high

Realuyo ’21 [Celina; June 29; Professor of Practice at the William J. Perry Center for Hemispheric Defense Studies at the National Defense University, Adjunct Professor at the George Washington University and a Senior Fellow at the Joint Special Operations University, interviewed by Paul Vallet; “Latin America and transnational organised crime,” https://www.gcsp.ch/digital-hub/latin-america-and-transnational-organised-crime]

Dr Paul Vallet: Welcome to the Geneva Centre for Security Policy weekly podcast. I'm your host, Dr Paul Vallet, Associate Fellow with the Global Fellowship Initiative. For the next few weeks, I'm talking with subject matter experts to discuss issues of peace, security and international cooperation. Thank you, listeners for tuning in. As you may have heard, a successful law enforcement operation led worldwide by the US, European, Australian and New Zealand police forces has just concluded against international organised crime and drug trafficking networks, reminding us that the global importance of allied forces in fighting transnational crime. So, to discuss this I'm joined today by one of our guest speakers at this year's recently concluded Leadership in International Security Course, Professor Celina Realuyo. Professor Realuyo is Professor of Practice at the William J. Perry Center for Hemispheric Defense Studies at the National Defense University in the United States, where she focuses on US national security, illicit networks, transnational organised crime, counterterrorism, and threat finance issues in the Americas. She's a former US diplomat, also an international banker with Goldman Sachs, US counterterrorism official, and Professor of International Security Affairs at the National Defense Georgetown, George Washington, and Joint Special Operations Universities. Professor Realuyo has over two decades of experience in international public, private and academic sectors. She's a regular commentator in the international media, including CNN en Espanol, Deutsche Welle, Foreign Policy, Reuters and Univision and has testified before the US Congress on national security, terrorism and crime issues. Professor Realuyo is a member of the Council on Foreign Relations, International Institute for Strategic Studies and women in international security. She has travelled to over 70 countries, she speaks English, French, Spanish, and is convergent in Italian, German, Filipino and Arabic. So, with all that combined knowledge, I think you will give us some fabulous insight into transnational crime. So welcome to the podcast, professor. And thank you for joining us today.

Professor Celina Realuyo: Thank you, Paul, for having me back.

Dr Paul Vallet: You're most welcome. My first question would be to, of course, set the scene. So, could you tell us what are the particularities of transnational crime? And do those particularities when applied to Latin America differ much from those of other regions?

Professor Celina Realuyo: to just take a look at the global perspective and your intro on that massive takedown using technology, and international cooperation of law enforcement and intelligence assets is a great publicised achievement to combat transnational organised crime. So we always wonder why does transnational organised crime exists? It's existed since the days of the Greeks and Romans as we think about contraband, slavery, all of the things that we have now are actually vestiges from ancient times. But what's different now with globalisation is with the technology, communications, and the global market. Sadly, for drugs, people, weapons, exotic animals, minerals, we've seen this explosion across the world. And these groups are most mostly motivated by one thing, maximising their profits, but also reducing their risk of getting caught by law enforcement agencies around the world. What we're seeing, though, as well is that in different parts of the world, they're different characteristics. So, you're located in Europe, that tends to be a destination country for these illicit trafficking issues, especially now for drugs. And the amount of cocaine arriving in Europe is tremendous as in the United States, we're less interested in consuming cocaine as opposed to opioids, which are synthetic drugs, we are seeing this massive flow that had traditionally gone from South America to North America towards European markets. So that's an example of how Europe is more of a destination or a consumer destination as opposed to the producers. So, in contrast, Latin America has predominantly been for the past 50 years, the main producers of obviously cocaine, but also trades in marijuana and heroin. And more recently, the advent of what we call synthetic drugs, such as opioids, particularly methamphetamine and fentanyl, that is impacting the United States tremendously. So just to give you a little context, as I am based in the US and I focus on the US, we sadly reached over 90,000 drug overdose deaths, mainly due to opioids, just last year and this was during the pandemic when the markets and points of sale had been closed. So Latin America is a producer, a transit and, more importantly, also now a consumer, which had not been the case in the past. So we're starting to see similarities across the world of the importance of reducing demand and even more importantly, socialising and educating the public at how dangerous these drugs especially combined with synthetics could be actually lethal.

Dr Paul Vallet: Well, that's already a sobering thought. And thank you, of course for highlighting the fact how Latin America interacts, in fact in with other regions in what is a global problem. So, that leads me to my second question, which is to wonder whether our Latin American authorities and Latin American solutions best suited to tackle the transnational crime in the region? Or would they require a more global dimension to the response to that crime with the input of other regions?

Professor Celina Realuyo: So, in Latin America, we've actually witnessed, unfortunately, many countries struggling to combat transnational organised crime and its different manifestations, right. So, we talk about drug trafficking, human smuggling, and trafficking arms and weapons trafficking and the money laundering that accompanies it. And, to their credit, many Latin American countries have established the legal frameworks in order to pursue particularly transnational criminal organisations, which means they can through Mutual Legal Assistance Treaties, and through sharing intelligence information, they've been able to collaborate particularly with us in the United States on massive operations. But the problem that you have is the issue of not just corruption, but weak institutions, even institutions that are infiltrated. And this is something that we've actually seen as an inherent challenge. But also the question is, how can other partner nations help the Latin American countries in their fight against transnational organised crime, and this is where we see a lot of help coming from Europe as well as the United States in terms of technical assistance and training to help build up the security forces, whether they be police or Gendarmerie, as well as trying to fortify their judicial systems, right? In order to actually bring the criminals to justice. And sadly, that's where we see a lot of high levels of impunity. Just to give you an example, in Mexico, only 3% of crimes are reported and brought to trial. So that leaves 97% in the case of impunity.

#### No Latin America war---cooperative ties and U.S. military primacy

Tokatlian ’18 [Juan; September 5; International Relations professor at the Di Tella University, International Relations PhD from Johns Hopkins University. [No One’s Supplanting US Military Influence in Latin America; Defense One, “No One’s Supplanting US Military Influence in Latin America,” <https://www.defenseone.com/ideas/2018/09/no-ones-supplanting-us-military-influence-latin-america/151029/>]

Many U.S. and Latin American experts who analyze inter-American military relations tend to repeat two inaccuracies. First, they confuse diplomatic statements and military realities. Second, they reckon that the military policies of China, Russia, Iran, and India towards Latin America are generating a disturbing imbalance that is detrimental to Washington.

The former tendency is exemplified by an emphasis on then-Secretary of State John Kerry’s 2013 speech announcing the end of the Monroe Doctrine. In practice, however, the Defense Department and especially U.S. Southern Command, have reaffirmed their supremacy in Latin America.

The latter tendency requires a bit more unpacking. There is no doubt that China’s economic growth is being accompanied by an incipient military projection beyond its regional area of influence, including attempts to boost arms exports to Latin America. Yet Bejing’s effective military impact upon Latin America in the region remains low — with the exception of its arms exports to Venezuela. Russia is the region’s largest foreign arms supplier: since 2013, according to SIPRI, Moscow has supplied 27 percent of the region’s imported weapons, more than the United States (15 percent) and France (10 percent) combined. Meanwhile, military ties between Iran and Latin America annoy Washington, but Tehran lacks the capability to ensure its standing or hinder U.S. preeminence in the region. And as for the limited defense ties between India and Latin America, Indian specialist Sanjay Badri-Maharaj says it is a farce to talk about them.

In short, the U.S. military preponderance in the region persists and it is rock-solid. No extra-regional country, individually or jointly, can challenge U.S. military clout and control in the region. Among its instruments are U.S. Southern Command, located in Miami; the U.S. Navy’s Fourth Fleet, disestablished in 1950 and reassembled in 2008; military bases in Cuba and Honduras; cooperative security locations in El Salvador and Aruba-Curacao; and security assistance organizations in various Latin American countries. And while Beijing has sought to implement security cooperation programs and extend more invitations to military courses in China, its efforts are so far dwarfed [overwhelmed] by Washington’s: according to the Washington Office on Latin America: 75 out of 107 U.S. global military assistance programs are operating in the region, while the last year alone saw 5,361 Latin American military and security personnel trained in the United States.

China and Russia are trying to increase military-to-military contacts, but the United States has the National Guard’s State Partnership Program by which 17 states, plus Puerto Rico and Washington, D.C., have agreements on security and defense with 23 Latin American countries. Beijing and Moscow has been promising material assistance in the area of defense and security, but it is Washington that earlier this year pledged $436 million in military and police aid, according to data from Security Assistance Monitor (https://securityassistance.org/latin-america-and-caribbean) (This year, the U.S. sold $1.3 billion in arms to Mexico alone.

It is true that Russia has expanded its relationship with Venezuela, to the point that it now undertakes military exercises that seriously concern the United States. However, SouthCom conducts regular, collective joint exercises with countries in Latin America through drills such as Panamax, UNITAS, Tradewinds and New Horizons.

And U.S. special operations there have drifted upward. Since 2006, the slice of U.S. special operators deployed to the region has risen from 3 percent to 4.39 percent, according to researcher Nick Turse. In fiscal 2016, the Special Operations Command South conducted several anti-terrorist maneuvers with specialized regional units in the context of a change of focus from Central America to the Caribbean (especially with the Dominican Republic and Trinidad and Tobago) and a growing emphasis on South America (especially Brazil, Chile and Peru). In 2017, the Army’s Special Forces conducted various exercises with the armed forces of the region: with naval forces from Central America targeting drug interdiction; with Colombian and Peruvian units on matters such as drug-trafficking and terrorism, and with special forces from Chile on urban warfare.

In addition, visits to the region by U.S. military officials are very frequent and in some years they have surpassed trips by diplomats. There are some 1,200 uniformed military and civilians dealing with Latin America in SouthCom, more than the total of officials from various government agencies in Washington. The political influence of the military in inter-American relations is such that before assuming their respective presidencies in Colombia and Paraguay, Ivan Duque and Mario Abdo Benitez, visited SouthCom at Doral Florida.

To sum up, the United States remains undoubtedly, and by far, the primus inter pares on military affairs vis-à-vis Latin America. The acceptance of the idea, both in Latin America and the United States, that military policies by China, Russia, and Iran towards the area are alarming is questionable. The available evidence does not support such fear. U.S. military primacy in the Americas is undeniable.

### Advantage 3

#### No Asia war

Green 20 – Brendan Green, Political Science Professor at the University of Cincinnati. [Security Threats in Contemporary World Politics: Potential Hegemons, Partnerships, and Primacy," Published in *A Dangerous World? Threat Perception and U.S. National Security*, https://www.cato.org/publications/publications/security-threats-contemporary-world-politics-potential-hegemons#dangers-american-alliances]

Primacy and the Goldilocks Problem

A broad range of research in international relations suggests that, under most circumstances, great power politics in Asia is likely to be peaceful. Defensive realists have long argued that the costs of conquests are extraordinarily high; their theories are especially relevant in Asia, where maritime geography and the likely presence of secure nuclear arsenals provide a large defensive advantage.21 Liberal arguments often come to the same conclusion by a different route: economic exchange has skyrocketed in Asia, creating the capitalist interdependence that is often said to incentivize peace. Modern economies have become more difficult to exploit, meaning that fewer economic gains are to be had from conquest.22

One could further add cognitive, normative, and biological arguments: Steven Pinker has recently argued that humans are moving away from warfare for all those reasons, while John Mueller has contended that major war among modern, industrial societies has already gone the way of dueling among people.23 Even the Asian absence of two traditional liberal causes of peace—widespread democracy and dense institutionalization—has become a less compelling worry. Although Asia lacks the institutionalization of European politics, it is not exactly devoid of institutions, which have increased in number, membership, and overlapping linkages since the end of the Cold War.24 More Asian regimes are democracies than ever before, and China’s autocratic regime appears to bias its external politics in favor of compromise, so that it can maintain domestic control.25

#### ASEAN fails

Maizland '20 [Lindsay; 11/24/20; editor at the Council on Foreign Relations, covering Asia; "What Is ASEAN?" https://www.cfr.org/backgrounder/what-asean]

ASEAN is headed by a chair—a position that rotates annually among member states—and is assisted by a secretariat based in Jakarta, Indonesia. Important decisions are usually reached through consultation and consensus guided by the principles of noninterference in internal affairs and peaceful resolution of conflicts. Some experts see this approach to decision-making as a chief drawback for the organization. “These norms of consensus and noninterference have increasingly become outdated, and they have hindered ASEAN’s influence on issues ranging from dealing with China and crises in particular ASEAN states,” says CFR’s Joshua Kurlantzick.

# 2NC

## A1

### 2NC --- O/V (Medium)

#### we would survive nuke war

Reisner et al. 18 [Jon Reisner – Climate and atmospheric scientist at the Los Alamos National Laboratory. Gennaro D’Angelo – Climate scientist at the Los Alamos National Laboratory, Research scientist at the SETI institute, Associate specialist at the University of California, Santa Cruz, NASA Postdoctoral Fellow at the NASA Ames Research Center, UKAFF Fellow at the University of Exeter. Eunmo Koo - Scientist at Applied Terrestrial, Energy, and Atmospheric Modeling (ATEAM) Team, in Computational Earth Science Group (EES-16) in Earth and Environmental Sciences Division and Co-Lead of Parallel Computing Summer Research Internship (PCSRI) program at the Los Alamos National Laboratory, former Staff research associate at UC Berkeley. Wesley Even - Computational scientist in the Computational Physics and Methods Group at Los Alamos National Laboratory. Matthew Hecht – Atmospheric scientist at the Los Alamos National Laboratory. Elizabeth Hunke - Lead developer for the Los Alamos Sea Ice Model (CICE) at the Los Alamos National Laboratory responsible for development and incorporation of new parameterizations, model testing and validation, computational performance, documentation, and consultation with external model users on all aspects of sea ice modeling, including interfacing with global climate and earth system models. Darin Comeau – Climate scientist at the Los Alamos National Laboratory, Randy Bos - Project leader at the Los Alamos National Laboratory, former Weapons Effects program manager at Tech-Source, James Cooley – Computational scientist at the Los Alamos National Laboratory specializing in weapons physics, emergency response, and computational physics, “Climate impact of a regional nuclear weapons exchange:An improved assessment based on detailed source calculations,” March 16, 2018, <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017JD027331>]

To quantitatively account for natural and forced variability in the climate system, we created two ensembles, one for the natural, unforced system and a second ensemble using a range of realistic vertical profiles for the BC aerosol forcing, consistent with our detailed fire simulation. The control ensemble was generated using small atmospheric temperature perturbations (Kay et al., 2015). Notably, the overall spread of anomalies in both ensembles is very similar. These ensembles were then used to create “super ensembles” using a statistical emulator, which allows a robust statistical comparison of our simulated results with and without the carbon forcing. Our primary result is the **decreased impact on global climate indices**, such as global average surface temperature and precipitation, relative to standard scenarios considered in previous work (e.g., Robock et al., 2007a; Stenke et al., 2013; Mills et al., 2014; Pausata et al., 2016). With our finding of **substantially less BC aerosol being lofted to stratospheric heights** (e.g., over a factor of four less than in most of the scenarios considered by previous studies), these globally averaged anomalies drop to **statistically insignificant levels** after the first several years (Figures 14 and 16). Our results are generally comparable to those predicted by other studies that considered exchange scenarios in which only about 1 Tg of soot is emitted in the upper troposphere (Robock et al., 2007a; Mills et al., 2008; Stenke et al., 2013). There are more subtle suggestions of regional effects, notably in the extent of the region over which sea surface temperature differences between ensembles remain significant in the final years of simulation (Figure 17). Further work is required to adequately analyze these and other potential regional effects. Historical analysis of several large volcanic eruptions and a recent large fire also supports this result. For example, Timmreck et al. (2010) claim that nonlinear aerosol effects of the Toba Tuff eruption 74,000 years ago helped **limit significant global cooling** impacts to a **two-year time period** and that any cooling beyond this time period could be due to other effects. It should be noted that this eruption was estimated to have produced **106 Tg** of ash and comparable amounts of other gases, such as sulfur dioxide (SO2), while the estimated amount of soot produced by a regional exchange is on the order of **10 Tg**, or **5 orders of magnitude smaller than the ash** (not including gases) **produced by the Toba eruption**. Noting that a nuclear exchange is not identical to volcanic events, it has been asserted that BC particles produced by fires should have a **greater impact on absorbing solar radiation** than even has the significantly larger amounts of ash and various gases produced by large eruptions (e.g., Robock and Toon 2010). Likewise, recent work in analyzing BC emissions from large fires suggests that in such fires, similar to large volcanic eruptions, **coating of soot particles with other particles** in convective eddies **tends to increase their size and hence increase their subsequent rainout** (China et al., 2013) before they can reach the stratosphere. In fact, the recent study of Pausata et al. (2016) found that growth of BC aerosol via coagulation with organic carbon significantly reduce the particles’ lifetime

### 2NC --- ! Run (Read)

#### Tech run-off – AI, nanobots, and genetic engineering – extinction

Pueyo, 19 (Salvador Pueyo, Universitat de Barcelona, Ecologia, Department Member, “Limits to green growth and the dynamics of innovation”, Universitat de Barcelona, <https://arxiv.org/abs/1904.09586>) //babcii

4.3 Evolving patterns of innovation and limits to assimilable innovation

This section moves beyond the limitations of the model in secs. 2-3 by questioning two implicit assumptions also shared by most of the related literature: (1) That the role of technological development is only positive (also discussed by Pargman and Wallsten, 2017) and (2) that current patterns of innovation (in this case, characterized by Eq. 5) are indefinitely extrapolatable. Even if, by applying some given market instruments, eco-innovation becomes a major share of innovation, innovation in other aspects will grow at similar if not greater rates, in some cases just because it might be intertwined with eco-innovation. Policies to facilitate generic innovation make part of the green growth programme, as a support for its more specific tools (UNEP, 2014). Furthermore, for endogenous growth theories, innovation is essential for growth (Barro and Sala-i-Martin, 2004). The basis of exponential growth according to these theories, as well as the result of exponential growth according to most innovation models in sec. 2, is accelerating innovation7 . Unfortunately, accelerating innovation results in a number of challenges, which are discussed below. Two implications follow. First, the need to understand and develop institutional solutions to such challenges at a speed commensurate with the rate at which they emerge, which is problematic if innovation accelerates through time. Second, the difficulty to develop such solutions in a system that is based on competition and microeconomic growth imperatives (see Richters and Siemoneit, 2018) rather than solidarity and sufficiency. Albeit normally overlooked, the need to adapt the tempo of technological innovation to the tempo of institutional adaptation was already discussed in Meadows et al. (1972). These authors gave instances of geographic regions where the Green Revolution had improved people’s lives and others in which the social side effects had been clearly detrimental, which they attributed to preexisting institutional differences. In their words, such experiences show that social side-effects must be anticipated and forestalled before the large-scale introduction of a new technology (...). Such preparation for technological change requires, at the very least, a great deal of time. Every change in the normal way of doing things requires an adjustment time, while the population, consciously or unconsciously, restructures its social system to accommodate the change. While technology can change rapidly, political and social institutions generally change very slowly. Much more recently, even the literature on long-term implications of artificial intelligence (AI), which, in general, is extremely technophile and pro-growth (Pueyo, 2018), has been warning of the need to slow down the investment in AI development as compared to the investment in means to prevent its potentially irreversible impacts (e.g., Bostrom, 2014), which, however, are thought of as mostly technical means. Arguably, these would be useless in the absence of deep institutional changes (Pueyo, 2018). The very challenges that recipes such as green growth pretend to solve were created by technological innovations in combination with economic institutional arrangements, and the adequate institutional changes are indeed lagging behind, whether they are those promoted under the umbrella of green growth, degrowth or any other. Unfortunately, accelerating innovation is acceleratingly posing new challenges, from an exploding diversity of chemicals with deleterious or yet unknown impacts on health and the environment (UNEP, 2019) to new technologies usable for mass destruction, as was already the case of nuclear energy and appears to be the case of developments not just in AI but also in several other emergent technologies such as nanotechnology or new methods of genetic engineering (see, e.g., Sutherland et al. (2016) for a review of emergent threats, focusing on their significance for biodiversity). If the institutional capabilities to manage such risks does not evolve at a commensurate speed, **there will be an accumulation of serious threats for civilization** and the rest of the biosphere that will not be solved by increases in eco-efficiency or by new energy sources.

#### Growth-oriented AI ensures extinction---degrowth solves

Salvador **Pueyo 18**. 8 Department of Evolutionary Biology, Ecology, and Environmental Sciences, Universitat de Barcelona. 10/01/2018. “Growth, Degrowth, and the Challenge of Artificial Superintelligence.” Journal of Cleaner Production, vol. 197, pp. 1731–1736.

The challenges of sustainability and of superintelligence are not independent. The changing 84 fluxes of energy, matter, and information can be interpreted as different faces of a general acceleration2 85 . More directly, it is argued below that superintelligence would deeply affect 86 production technologies and also economic decisions, and could in turn be affected by the 87 socioeconomic and ecological context in which it develops. Along the lines of Pueyo (2014, p. 88 3454), this paper presents an approach that integrates these topics. It employs insights from a 89 variety of sources, such as ecological theory and several schools of economic theory. 90 The next section presents a thought experiment, in which superintelligence emerges after the 91 technical aspects of goal alignment have been resolved, and this occurs specifically in a neoliberal 92 scenario. Neoliberalism is a major force shaping current policies on a global level, which urges 93 governments to assume as their main role the creation and support of capitalist markets, and to 94 avoid interfering in their functioning (Mirowski, 2009). Neoliberal policies stand in sharp contrast 95 to degrowth views: the first are largely rationalized as a way to enhance efficiency and production 96 (Plehwe, 2009), and represent the maximum expression of capitalist values. 97 The thought experiment illustrates how superintelligence perfectly aligned with capitalist 98 markets could have very undesirable consequences for humanity and the whole biosphere. It also 99 suggests that there is little reason to expect that the wealthiest and most powerful people would be 100 exempt from these consequences, which, as argued below, gives reason for hope. Section 3 raises 101 the possibility of a broad social consensus to respond to this challenge along the lines of degrowth, 102 thus tackling major technological, environmental, and social problems simultaneously. The 103 uncertainty involved in these scenarios is vast, but, if a non-negligible probability is assigned to 104 these two futures, little room is left for either complacency or resignation. 105 106 2. Thought experiment: Superintelligence in a neoliberal scenario 107 108 Neoliberalism is creating a very special breeding ground for superintelligence, because it strives 109 to reduce the role of human agency in collective affairs. The neoliberal pioneer Friedrich Hayek 110 argued that the spontaneous order of markets was preferable over conscious plans, because markets, 111 he thought, have more capacity than humans to process information (Mirowski, 2009). Neoliberal 112 policies are actively transferring decisions to markets (Mirowski, 2009), while firms' automated 113 decision systems become an integral part of the market's information processing machinery 114 (Davenport and Harris, 2005). Neoliberal globalization is locking governments in the role of mere 115 players competing in the global market (Swank, 2016). Furthermore, automated governance is a 116 foundational tenet of neoliberal ideology (Plehwe, 2009, p. 23). 117 In the neoliberal scenario, most technological development can be expected to take place either in the context of firms or in support of firms3 118 . A number of institutionalist (Galbraith, 1985), post119 Keynesian (Lavoie, 2014; and references therein) and evolutionary (Metcalfe, 2008) economists 120 concur that, in capitalist markets, firms tend to maximize their growth rates (this principle is related 121 but not identical to the neoclassical assumption that firms maximize profits; Lavoie, 2014). Growth 122 maximization might be interpreted as expressing the goals of people in key positions, but, from an 123 evolutionary perspective, it is thought to result from a mechanism akin to natural selection 124 (Metcalfe, 2008). The first interpretation is insufficient if we accept that: (1) in big corporations, the 125 managerial bureaucracy is a coherent social-psychological system with motives and preferences of 126 its own (Gordon, 1968, p. 639; for an insider view, see Nace, 2005, pp. 1-10), (2) this system is 127 becoming techno-social-psychological with the progressive incorporation of decision-making 128 algorithms and the increasing opacity of such algorithms (Danaher, 2016), and (3) human mentality 129 and goals are partly shaped by firms themselves (Galbraith, 1985). 130 The type of AI best suited to participate in firms' decisions in this context is described in a 131 recent review in Science: AI researchers aim to construct a synthetic homo economicus, the 132 mythical perfectly rational agent of neoclassical economics. We review progress toward creating 133 this new species of machine, machina economicus (Parkes and Wellman, 2015, p. 267; a more 134 orthodox denomination would be Machina oeconomica). 135 Firm growth is thought to rely critically on retained earnings (Galbraith, 1985; Lavoie, 2014, p. 136 134-141). Therefore, economic selection can be generally expected to favor firms in which these are greater. The aggregate retained earnings4 137 RE of all firms in an economy can be expressed as: 138 RE=FE(R,L,K)-w⋅L-(i+δ)⋅K-g. (1) 139 Bold symbols represent vectors (to indicate multidimensionality). F is an aggregate production 140 function, relying on inputs of various types of natural resources R, labor L and capital K (including intelligent machines), and being affected by environmental factors5 141 E; w are wages, i are returns to 142 capital (dividends, interests) paid to households, δ is depreciation and g are the net taxes paid to 143 governments. 144 Increases in retained earnings face constraints, such as trade-offs among different parameters of 145 Eq. 1. The present thought experiment explores the consequences of economic selection in a 146 scenario in which two sets of constraints are nearly absent: sociopolitical constraints on market 147 dynamics are averted by a neoliberal institutional setting, while technical constraints are overcome 148 by asymptotically advanced technology (with extreme AI allowing for extreme technological 149 development also in other fields). The environmental and the social implications are discussed in 150 turn. Note that this scenario is not defined by some contingent choice of AIs' goals by their 151 programmers: The goals of maximizing each firm's growth and retained earnings are assumed to 152 emerge from the collective dynamics of large sets of entities subject to capitalistic rules of 153 interaction and, therefore, to economic selection.

#### Growth makes catastrophic disease inevitable — extinction.

Morand & Walther 20 (\*Serge Morand; PhD, disease ecologist @ Kasetsart University; \*\*Bruno A. Walther; DPhil, Taipei Medical University; 4/20/20; “The accelerated infectious disease risk in the Anthropocene: more outbreaks and wider global spread”; pg. 3-4; Accessible at: <https://doi.org/10.1101/2020.04.20.049866>) \*”to” added to preserve grammatical integrity, brackets denote a change

We here want to draw attention to another important and noteworthy feature of the Anthropocene which greatly affects public health, human well-being, and economic performance. These findings are especially pertinent as the world reels from the health, social and economic impact of the current SARS-CoV-2 pandemic (El Zowalaty and Järhult, 2020; Ghebreyesus and Swaminathan, 2020; Lorusso et al., 2020). The increasing connectivity of human populations due to international trade and travel (Guimerà et al., 2005; Colizza et al., 2006; Brockmann and Helbing, 2013; Gabrielli et al., 2019), the rapid growth of the transport of wild and domesticated animals worldwide (Rosen and Smith, 2010; Schneider, 2012; Rohr et al., 2019; Levitt, 2020), and other factors such as the increasing encroachment of human populations on hitherto isolated wild animal populations through loss and fragmentation of wild habitats (Patz et al., 2004; Despommier et al., 2006; Pongsiri et al., 2009; Myers et al., 2013) have led to a great acceleration of infectious disease risks, e.g., the increase in emerging infectious diseases and drug-resistant microbes since 1940 (Jones et al., 2008) and the increase in the number of disease outbreaks since 1980 (Smith et al., 2014). To expand the previous analysis (Smith et al., 2014) to the beginning of the Anthropocene, we investigated whether the number of disease outbreaks has increased since the Second World War. In addition, we examined whether the global pattern of infectious disease outbreaks changed possibly due [to] the increasing connectivity of human populations. In other words, have the disease outbreaks become more globalized in the sense that these outbreaks are increasingly shared by countries worldwide? To investigate these questions, we used a the most complete, reliable, and up-to-date global dataset (GIDEON Informatics, 2020) which had already been used in the previous analysis (Smith et al., 2014). This dataset can be used to enumerated the recorded annual number of disease outbreaks. To investigate the changing global patterns of disease outbreaks, we used this dataset to calculate two measures which have been recently introduced into ecological and parasitological studies. These two measures, namely modularity and centrality, quantify the connectivity of bipartite networks. Modularity is defined as the extent to which nodes (specifically, sites and species for presenceabsence matrices) in a compartment are more likely to be connected to each other than to other nodes of the network (Thébault, 2013). The calculation of a modularity measure is useful for global phenomena because it allows the overall level of compartmentalization (or fragmentation) into compartments (or clusters, modules, subgroups, or subsets) of an entire dataset to be quantified. High modularity in a global network means that subgroups of countries and disease outbreaks interact more strongly among themselves (that is, within a compartment) than with the other subgroups (that is, among compartments) (Bordes et al., 2015). Centrality is defined as the degree of the connectedness of a node (e.g., a keystone species in ecological studies; Jordán, 2009; González et al., 2010). In the context of our study, centrality is the degree of the connectedness of a country and those countries connected to it. We estimated the countries which are the potential centres of disease outbreaks by investigating the eigenvector centrality of a given country in a network of countries which share disease outbreaks among each other. Eigenvector centrality is a generalization of degree centrality, which is the number of connections a country has to other countries in terms of sharing disease outbreaks. Eigenvector centrality considers countries to be highly central if the connected countries to them through shared outbreaks are connected to many other well-connected countries (Bonacich and Lloyd, 2001; Wells et al., 2020). Modularity and centrality analyses have been used to investigate various ecological, parasitological and epidemiological questions (e.g., Tylianakis et al., 2007; Jordán, 2009; González et al., 2010; Anderson and Sukhdeo, 2011; Bascompte and Jordano, 2014; Poisot et al., 2014; Bordes et al., 2015; Genrich et al., 2017). Using a widely used world dataset on infectious disease outbreaks, we here present results which demonstrate that the accelerated number of disease outbreaks and their increased global spread are two further threatening aspects of the accelerated infectious disease risk associated with the globalization process which characterizes the Anthropocene.

#### Chemical emissions.

Julian Cribb 17, Fellow of the Australian Academy of Technological Sciences and Engineering, 2017, “The Poisoner,” in Surviving the 21st Century, p. 113-117

There are two essential points about the Earthwide chemical flood. First it is quite new. It began with the industrial revolution of the late nineteenth century, but expanded dramatically in the wake of the two world wars—where chemicals were extensively used in munitions—and has exploded in deadly earnest in the past 50 years, attaining a new crescendo in the early twenty-first century. It is something our ancestors never faced—and to which we, in consequence, lack any protective adaptations which might otherwise have evolved due to constant exposure to poisons. ¶ Second, the toxic flood is, for the most part, preventable. It is not compulsory—but is an unwanted by-product of economic growth. Though driven by powerful industries and interests, it still lies within the powers and rights of citizens, consumers and their governments to demand it be curtailed or ended and to encourage industry to safer, healthier products and production systems. ¶ The issue is whether, or not, a wise humanity would choose to continue poisoning our children, ourselves and our world. ¶ Regulatory Failure ¶ Despite the fact that around 2000 new chemicals are released onto world markets annually, most have not received proper health, safety or environmental screening—especially in terms of their impact on babies and small children. Regulation has so far failed to make any serious curtailment of this flood: only 21 out of 144,000 known chemicals have been banned internationally, and this has not eliminated their use. At such a rate of progress it will take us more than 50,000 years to identify and prohibit or restrict all the chemicals which do us harm. Even then, bans will only apply in a handful of well-regulated countries, and will not protect the Earth system nor humanity at large. Clearly, national regulation holds few answers to what is now an out-of-control global problem. ¶ Furthermore, the chemical industry is relocating from the developed world (where it is quite well regulated and observes its own ethical standards) and into developing countries, mainly in Asia, where it is largely beyond the reach of either ethics or the law. However, its toxic emissions return to citizens in well-regulated countries via wind, water, food, wildlife, consumer goods, industrial products and people. The bottom line is that it doesn’t matter how good your country’s regulations are: you and your family are still exposed to a growing global flood of toxins from which even a careful diet and sensible consumer choices cannot fully protect you. ¶ The wake-up call to the world about the risks of chemical contamination was issued by American biologist Rachel Carson when she published Silent Spring in 1962, in which she warned specifically about the impact of certain persistent pesticides used in agriculture. Since her book came out, the volume of pesticide use worldwide has increased 30-fold, to around four million tonnes a year in the mid-2010s. Since the modern chemical age began there has been a string of high-profile chemical disasters: Minamata, the Love Canal, Seveso, Bhopal, Flixborough, Oppau, Toulouse, Hinkley, Texas City, Jilin, Tianjin. Most of these display a familiar pattern of unproductive confrontation between angry citizens, industry and regulators, involving drawn-out legal battles that deliver justice to nobody. By their spectacular and local nature, such events serve to distract from the far larger, more insidious and ubiquitous, universal toxic flood. ¶ Chemists and chemical makers often claim that their products are ‘safe’ because individual exposure (e.g. in a given product, like a serve of food) is too low to result in a toxic dose, a theory first put forward by the mediaeval scholar Paracelsus in the sixteenth century. This ‘dose related’ argument is disingenuous, if not dishonest—as modern chemists well know—for the following reasons: Most chemicals target a receptor or receptors on certain of your body cells, to cause harm. There may be not one, but hundreds or even thousands of different chemicals all targeting the same receptor, so a particular substance may contribute an unknowable fraction to an overall toxic dose. That does not make it ‘safe’. Chemicals not known to be poisonous in small doses on their own can combine with other substances in water, air, food or your body to create a toxin. No manufacturer can truthfully assert this will not happen to their products. Chemical toxicity is a function of both dose and the length of time you are exposed to it. In the case of persistent chemicals and heavy metals, this exposure may occur over days, months, years, even a lifetime in some cases. Tiny doses may thus accumulate into toxic ones. Most chemical toxicity is still measured on the basis of an exposed adult male. Babies and children being smaller and using much more water, food and air for their bodyweight, are therefore more at risk of receiving a poisonous dose than are adults. ¶ Chemicals and minerals are valuable and extremely useful. They do great good, save many lives and much money. No-one is suggesting they should all be banned. But their value may be for nothing if the current uncontrolled, unmonitored, unregulated and unconscionable mass release and planetary saturation continues.¶ Chemical Extinction ¶ Two billion years ago, excessive production of one particular poisonous chemical by the inhabitants of Earth caused a colossal die-off and threatened the extermination of all life. That chemical was oxygen and it was excreted by the blue-green algae which then dominated the planet, as part of their photosynthetic processes. After several hundred million of years, the planet’s physical ability to soak up the surplus O2 in iron formations, oceans and sediments had reached saturation and the gas began to poison the existing life. This event was known as the ‘oxygen holocaust’, and is probably the nearest life on Earth has ever come to complete disaster before the present (Margulis and Sagan 1986). Since it developed slowly, over tens of millions of years, the poisonous atmosphere permitted some of these primitive organisms to evolve a tolerance to O2—and this in time led to the rise of oxygen-dependent species such as fish, mammals and eventually, us. The takehome learning from this brush with total annihilation is that it is possible for living creatures to pollute themselves into oblivion, if they don’t take care to avoid it or rapidly adapt to the new, toxic environment. It’s a message that humans, with our colossal planetary chemical impact, would do well to ponder. ¶ While it is unlikely that human chemical emissions alone could reach such a volume and toxic state as to directly threaten our entire species with extinction (other than through carbon emissions in a runaway global warming event) or even the collapse of civilization, it is likely they will emerge as a serious contributing factor during the twenty-first century in combination with other factors such as war, climate change, pandemic disease and ecosystem breakdown. Credible ways in which man-made chemicals might imperil the human future include: Undermining the immune systems, physical and mental health of the population through growing exposure to toxins Reducing the intelligence of current and future generations through the action of nerve poisons on the developing brains and central nervous systems of children, rendering humanity less able to solve its problems and adapt to major changes; and by increasing the level of violent crime and conflict in society, which is closely linked to lower IQ. Bringing down the economy through the massive healthcare costs of having to nurse, treat and maintain a growing proportion of the population disabled by lifelong chronic chemical exposure. By poisoning the ecosystem services—clean air, water, soil, plants, insects and wildlife—on which humanity depends for its own survival and thereby contributing to potential global ecosystem breakdown By augmenting the global arsenal of weapons of mass destruction and hence the risk of their use by nations or uncontrollable fanatics.

#### Soil erosion causes extinction.

George Monbiot 15, author and investigative reporter, “We’re treating soil like dirt. It’s a fatal mistake, as our lives depend on it,” 3/25/15, https://www.theguardian.com/commentisfree/2015/mar/25/treating-soil-like-dirt-fatal-mistake-human-life

Imagine a wonderful world, a planet on which there was no threat of climate breakdown, no loss of freshwater, no antibiotic resistance, no obesity crisis, no terrorism, no war. Surely, then, we would be out of major danger? Sorry. Even if everything else were miraculously fixed, we’re finished if we don’t address an issue considered so marginal and irrelevant that you can go for months without seeing it in a newspaper.It’s literally and – it seems – metaphorically, beneath us. To judge by its absence from the media, most journalists consider it unworthy of consideration. But all human life depends on it. We knew this long ago, but somehow it has been forgotten. As a Sanskrit text written in about 1500BC noted: “Upon this handful of soil our survival depends. Husband it and it will grow our food, our fuel and our shelter and surround us with beauty. Abuse it and the soil will collapse and die, taking humanity with it.”The issue hasn’t changed, but we have. Landowners around the world are now engaged in an orgy of soil destruction so intense that, according to the UN’s Food and Agriculture Organisation, the world on average has just 60 more years of growing crops. Even in Britain, which is spared the tropical downpours that so quickly strip exposed soil from the land, Farmers Weekly reports, we have “only 100 harvests left”.To keep up with global food demand, the UN estimates, 6m hectares (14.8m acres) of new farmland will be needed every year. Instead, 12m hectares a year are lost through soil degradation. We wreck it, then move on, trashing rainforests and other precious habitats as we go. Soil is an almost magical substance, a living system that transforms the materials it encounters, making them available to plants. That handful the Vedic master showed his disciples contains more micro-organisms than all the people who have ever lived on Earth. Yet we treat it like, well, dirt.The techniques that were supposed to feed the world threaten us with starvation. A paper just published in the journal Anthropocene analyses the undisturbed sediments in an 11th-century French lake. It reveals that the intensification of farming over the past century has increased the rate of soil erosion sixtyfold.Another paper, by researchers in the UK, shows that soil in allotments – the small patches in towns and cities that people cultivate by hand – contains a third more organic carbon than agricultural soil and 25% more nitrogen. This is one of the reasons why allotment holders produce between four and 11 times more food per hectare than do farmers.Whenever I mention this issue, people ask: “But surely farmers have an interest in looking after their soil?” They do, and there are many excellent cultivators who seek to keep their soil on the land. There are also some terrible farmers, often absentees, who allow contractors to rip their fields to shreds for the sake of a quick profit. Even the good ones are hampered by an economic and political system that could scarcely be better designed to frustrate them.This is the International Year of Soils, but you wouldn’t know it. In January, the Westminster government published a new set of soil standards, marginally better than those they replaced, but wholly unmatched to the scale of the problem. There are no penalities for compromising our survival except a partial withholding of public subsidies. Yet even this pathetic guidance is considered intolerable by the National Farmers’ Union, which greeted them with bitter complaints. Sometimes the NFU seems to me to exist to champion bad practice and block any possibility of positive change.Few sights are as gruesome as the glee with which the NFU celebrated the death last year of the European soil framework directive, the only measure with the potential to arrest our soil-erosion crisis. The NFU, supported by successive British governments, fought for eight years to destroy it, then crowed like a shedful of cockerels when it won. Looking back on this episode, we will see it as a parable of our times.Soon after that, the business minister, Matthew Hancock, announced that he was putting “business in charge of driving reform”: trade associations would be able “to review enforcement of regulation in their sectors.” The NFU was one the first two bodies granted this privilege. Hancock explained that this “is all part of our unambiguously pro-business agenda to increase the financial security of the British people.” But it doesn’t increase our security, financial or otherwise. It undermines it.The government’s deregulation bill, which has now almost completed its passage through parliament, will force regulators – including those charged with protecting the fabric of the land – to “have regard to the desirability of promoting economic growth”. But short-term growth at the expense of public protection compromises long-term survival. This “unambiguously pro-business agenda” is deregulating us to death.There’s no longer even an appetite for studying the problem. Just one university – Aberdeen – now offers a degree in soil science. All the rest have been closed down.This is what topples civilisations. War and pestilence might kill large numbers of people, but in most cases the population recovers. But lose the soil and everything goes with it.Now, globalisation ensures that this disaster is reproduced everywhere. In its early stages, globalisation enhances resilience: people are no longer dependent on the vagaries of local production. But as it proceeds, spreading the same destructive processes to all corners of the Earth, it undermines resilience, as it threatens to bring down systems everywhere.Almost all other issues are superficial by comparison. What appear to be great crises are slight and evanescent when held up against the steady trickling away of our subsistence.

### 2NC --- Sustainability (Short)

#### 1. Inevitable, unpredictable shocks.

Lechner et al. 16, European Commission, Joint Research Centre (JRC), Institute for the Protection and the Security of the Citizen (IPSC). 10/01/2016. “Resilience in a Complex World – Avoiding Cross-Sector Collapse.” International Journal of Disaster Risk Reduction, vol. 19, pp. 84–91.

In a more and more globalized world we have created unprecedented connectivity, mainly by striving for better business opportunities. But with such a strong global connectivity, the risks associated have also changed: formerly local issues can now have global impact, and systems are often too complex to fully understand their interdependencies. In addition, the speed of change is increasing in many sectors of society and the economy. So we are building a future world with more and more interdependencies of which we understand less and less, and this process is accelerating sharply. This means that we are mixing together the typical ingredients for an upcoming crash, which in the worst case could mean the collapse of society as we know it. To avoid such a scenario, a coordinated effort of public authorities, civil society, industry, and academia will be required. 1. Introduction Predictions about the collapse of society are probably as old as society itself, but only in the last decades has mankind managed to approach – and sometimes even overstep – the planetary boundaries [1,2] in several dimensions, often irreversibly. The scientific approach of modeling human societies on the basis predator (mankind) and prey (planetary resources) [3], also points to the possibility of a large-scale collapse. We often reassure ourselves by noting that all the models used are based on assumptions, that they have many uncertainties, that they only approximate our highly complex reality. Critical analyses of the limits of modeling seem to confirm this [4], and we know that technical models clearly do not take into account our human ingenuity at getting ourselves out of difficulties – but is this reassurance reasonable? Even the assumption that we can define our own future within the planetary boundaries is questioned by critical voices like Russell [5], warning us against the belief in unlimited growth of exponential curves, and drawing drastic conclusions about the future of mankind. Nevertheless, our economic strategies seem to assume continuously greater efficiency in the future and even faster economic growth with literally no limit. This method of forecasting future development by extrapolation from the past is risky in two different ways. Firstly, it does not respect natural limits to growth. These may arise from the limited availability of resources, or from physical boundaries which seemed far away in the past, but now have come into reach. A good example for the latter is Moore's law [6], predicting in 1965 a doubling of the maximum number of transistors in integrated circuits every 12 months. This “law”, adjusted to 24 months in 1975 and confirmed as ‘not going to stop soon’ in 1995 [7,8], remained valid for some 50 years, but it is now at or near its limits [9], imposed by several paradigms of fundamental physics. Although completely new approaches might one day circumvent some of these limits [10], Moore's law simply cannot remain valid for another 50 years for integrated circuits as we currently know them. Secondly, a prediction based solely on experience from the past does not foresee unexpected and potentially disruptive events. The Fukushima nuclear disaster of 2011 and the global financial crisis of 2007–08 are prominent examples of sudden events ending high-flying hopes for controlled risk in energy supply or ever-increasing economic profits, respectively. Looking at the large number of fascinating growth stories from sources like digital industries, Chinese GDP, or investment banking profits, we tend to forget about the fate of the stars from the past when they reached their limits: US automotive industries, Canadian and European cell phone producers or Japanese efficiency champions all have in common that they could not maintain their excellent growth rates for eternity. We need to pay attention to the limits of growth very carefully when looking at the long-term resilience of our global society. 2. Objectives We will show that globalization and the digital revolution have led to more interdependencies, higher complexity and rapid acceleration of change in most sectors of our societies and economies. For this reason, the long-term resilience of a nation, a region or an industry cannot be considered any more as a confined matter that has little to do with the global environment. We will demonstrate by several examples from the recent years that interconnection, complexity and acceleration thereof as ingredients of globalization and digitization have increased the risk of major shocks, propagating not only inside but also across individual sectors, and to society as a whole. We will show that there are strategies to limit this risk but also show that these strategies could not have been implemented successfully so far in our current economically driven environment. During the discussion we will look at two important concepts which are relevant to resilience, but are not at the center of the attention of our growth-oriented efforts today: fairness, which is important to avoid tensions within societies, and risk transfer, which in many examples seems to flow from the better-informed expert stakeholders to the less-informed parts of our society. We make a number of suggestions as to how science can support policy decisions in a highly complex world. We also propose a radically different pattern of business incentives, aimed at taking some steps towards improving fairness, at decoupling economic growth from consumption and above all at making risk-taking at someone else's expense less attractive. 3. Methods Although there is abundant literature about resilience, sustainability and risk, there are very few scientific discussions of hyper-complex issues spanning multiple sectors of our societies, policies and economies. The notion of so-called post-normal science, introduced by Funtowicz and Ravetz [11], is a step in the direction of understanding complex systems at the borderline between science and policy, but it only gives theoretical backing rather than direct guidance. More on the practical side, Taleb [12] provides many important examples, including valuable considerations on the human inability to assess risks correctly in complex environments. The issue of the human mind often being misled is also underlined by Spiegelhalter [13], showcasing several disruptive events with economic or health impact. Because resilience and sustainability are typically discussed in communities focused on the business perspective (such as re-insurance companies), at the national level (governments), or in a particular community (e.g. the civil protection community), there is no obvious forum for a broader scale discussion at supranational level, connecting economic, political and societal dimensions. We started such a dialog on the work of the European Commission's Joint Research Centre (JRC), when around 2012 we realized that the typical crisis management activities are related to civil protection, but the predominant crisis of these years was the financial crisis, in which the JRC was performing completely different activities such as modeling the probabilities of bank failure or assessing the trends and issues in public finances of Eurozone Member States. From the idea of resilience cutting across sectors and being relevant in many places, we identified many sectors in society, policy and economy where resilience matters, and documented them in an overview report [14]. In a series of related workshops and conferences we discussed the facets of resilience with the stakeholder community and gathered valuable insights. In a 2014 workshop on 'Thinking the impossible' at the JRC in Ispra, Italy, we looked at risks that sound highly unlikely but could be devastating. At the Global Risk Forum 2014 in Davos we ran a dedicated session on risks across sectors of society. At the European Climate Foundation in Brussels early 2015 we followed up on the matter, and at a big conference of the European Commission in September 2015 (also in Brussels) we had a plenary presentation on resilience, complexity and risk across sectors of society. Finally, in joint session of the International Council of Science (ICSU) and the JRC at the World Science Forum of November 2015 in Budapest we discussed resilience in a changing world. The findings and conclusions of these workshops and conferences are presented in this article. 4. Results 4.1. Increased dependencies across sectors Crises can spread globally, and in our modern world they can easily also impact business sectors that at first glance do not seem exposed. In the following section we will show examples of how effects can hop from the digital world into the finance sector, from finance to government, on to geopolitics, to energy and finally to societal stability. The related damage in each hop amounts to several billions. Although the examples listed are not connected, in the future we might see cross-sector cascading effects. 4.1.1. From digital to finance In the digital world, computer viruses can cause damages in the millions, but these damages are usually distributed over a very large number of users and businesses. Other digital risks strike more centrally: high-speed trading algorithms, making autonomous decisions at the stock exchanges in milliseconds, caused the so-called flash crashes at the New York Stock exchange in 2010 and at the Singapore stock exchange in October 2013, with the latter reportedly wiping out 6.9bn USD [15]. It took more than four months to analyze the reasons behind the 15-min New York crash, and the report by the US authorities came to the conclusion that there was no clearly identifiable root cause that sparked the crash. They considered the events 'an important reminder of the inter-connectedness of our derivatives and securities markets' and stated that they 'clearly demonstrate the importance of data in today's world of fully-automated trading strategies and systems'[16]. Although many stocks rebounded right after the dip, the reaction of software algorithms could easily have ruined companies, and in Singapore some stocks lost 87% of their value. Safeguards were consequently installed in the systems of the stock exchanges, but other unpleasant and new surprises might come from different directions: high-frequency trading, for instance, can be vulnerable to the effects of solar storms [17], but not all financial institutions are aware of these very indirect effects: originating on the surface of the sun, solar outbreaks can create electromagnetic disturbances strong enough to take out the GPS signal, which is widely used for time synchronization in financial trading. 4.1.2. Financial to economic After the collapse of Lehman Brothers in 2008, a major shock went through the US banking system. Not only the US housing market had gone sour, but credit default swaps had been spread all over the globe – and a cascade of repackaged and distributed risk started, jumping the Atlantic Ocean easily and hitting EU banks. Some of these were hit so hard that they had to be bailed out by their governments, so the risk continued in the governments. Some EU governments needed central support, and the EU used the opportunity to overhaul its financial system. Nevertheless, the governments of eleven EU Member States resigned or were ousted over the crisis, some of them several times (Latvia and the Czech Republic in 2009, Ireland, Portugal, Greece, Italy and Spain, in 2011, Romania, the Netherlands, and Italy again in 2012, Slovenia in 2013, Italy a third time and France in 2014 and Portugal in 2015). The link between the US banking sector and EU government stability is obvious in hindsight, but very few if any observers had noted it before 2007. More obvious is the link from government to geopolitics. The Arab Spring gave rise to unstructured power relations and laid the ground for extremism and radicalism. Ukraine's attempt to sign an association agreement with the EU led to massive demonstrations and a regional political crisis, including a (civil) war. The civil war in Syria, ongoing since more than five years, has destroyed stability and economy in the region. And we recently saw in the gas supply discussions between Russia, Ukraine and the EU that geopolitics links to energy. It took a well-prepared last-minute effort to conclude a gas supply deal, which finally was agreed only shortly before winter, during the last days of October 2014. 4.1.3. Energy to society Energy is at the core of the economic development of many countries, and the power grid has become an indispensable critical infrastructure. A fictional but well-researched scenario on what the world would look like after a widespread collapse of the power grid is available in the book by Elsberg [18]. Elsberg considers an IT-based collapse, but that is not the only hazard to the power grid: several reports and studies on severe space weather suggest that this too could cause major damage, up to USD 2.6 trillion in the first year in the US alone [19,20]. In addition, energy has an obvious relation to climate policies, to the real economy and even to digital processes: modern computing centers depend on energy availability, and new digital concepts like the blockchain [21] of the bitcoin currency even exploit the obstacle of not being able to calculate highly complex matters without consuming significant energy [22]. There are numerous other examples where sectors that were reasonably independent in the past are now coupled across the globe. E. coli contaminated food traveled all across Europe. Pandemics like SARS or bird flu spread through intercontinental travelers. Ebola cases were spread by infected passengers from Africa to Europe and to the US; the disease was only contained through a major international initiative. All these examples show clearly that not only has the interrelation between sectors increased, but also the complexity of interdependencies in financial markets, of energy grids, of high-speed trading algorithms, of the food chains, of environmental changes and of global travel has grown hugely. Indeed, in many cases we only perceive these interdependencies after a major perturbation, and there is no agreement on what body or institution has the responsibility for identifying, monitoring, and controlling the risks created. The context of change is formally given a global perspective by the Global Risks Report 2016[23], which draws attention to ways global risks could evolve and interact in the next decade. The top five global risks in terms of likelihood are ranked to be: 1. large-scale involuntary migration; 2. extreme weather events; 3. failure of climate change mitigation and adaptation; 4. interstate conflict with regional consequences; and 5. major natural catastrophes. The report's Global Risks Interconnectedness Map 2016 shows strong interconnections across sectors, e.g. between environmental and societal risks (failure on climate change and water crises), but also across societal, geopolitical and economic risks (with strong links from state collapse to migration and between social instability and unemployment). 4.2. Increased complexity of systems and processes The financial crisis has brought to our attention that the lending relations in the interbanking market have become highly complex [24], which decreases systemic resilience. Haldane and May [25] identify modularity as a key feature for the topology of a stable financial system, as it helps limit contagion. Typically, one would expect that a good connectivity in financial networks allows for a sound distribution of risk, but Battiston et al. [26] have shown that in the presence of a financial accelerator (which we clearly had in the financial crisis, where the robustness of an entity was strongly assessed on the basis of its past trend) this only holds until a certain threshold is reached. Over the threshold, additional connectivity turns counterproductive and creates a pernicious feedback loop, increasing individual and systemic risk. The situation during the financial crisis was even worse than that depicted by the theoretical approaches. Little was known about the real connectivity in the banking system. Rumors about new candidates for bankruptcy were traveling fast, and the biggest unanswered question about the distribution of debt was literally: 'Where is the money?' In addition, banks were rushing to pass on questionable debt for as long as it was still possible, creating a dynamism which could not be controlled easily. The failure to understand the complexity of the market is perhaps depicted most prominently by the fact that the German KfW Bank transferred 320 million Euros to Lehman on Monday, September 15th, 2008, the very day Lehman collapsed. Luckily for the KfW, the majority of the sum was recovered later [27]. But the financial markets are just one example of a sector that has become so complex that we simply do not understand it anymore. The fact that we have also lost track of the details of our food chain became obvious when in 2011 the European E. coli bacteria outbreak caused several fatalities in Germany and beyond, and a frantic search for the origin started. Due to the precautionary principle, also suspect traces had to be addressed, resulting in Spanish cucumbers being wrongly identified as contaminated with E. coli. This led to reported weekly Spanish losses of 200 million Euros [28] due to the decline in consumer trust, whereas finally bean sprouts of completely different origin were identified as the root cause for the E. coli outbreak, although even this was contested. The issue showed how little we know about the origin and stopovers of our food. Another less damaging but unexpected complexity could be observed after the Fukushima nuclear disaster, when Ford Motors in the US and other international car makers could no longer produce models in a particular metallized black [29] due to a shortage in the Xirallic® pigment, produced by Merck plant near Fukushima, which had been affected by the catastrophe. (Note that strong impact from Fukushima also arrived on the other side of the planet, when the German government issued its Energiewende policy to abandon nuclear power as a consequence of the disaster in Japan.) This example shows that it is not only in the food sector that the complexity of supply chains has grown beyond our comprehension. The power grid is another infrastructure which has become so complex that we do not fully understand it anymore. On 4 November 2006, the cruise ship Norwegian Pearl was planned to make its way on the German river Ems to the North Sea, requiring a shutdown of a 380 kV power line across the river for safety reasons. Although a routine operation, this shutdown resulted in cascading effects all across Europe, leaving an estimated 15 million households in Germany, France, Italy, Belgium, Spain, and Portugal without power for more than an hour [30]. These examples show that our technologically driven world has developed structures and processes that cannot be fully understood or easily modeled anymore. Even if we had the time to carefully analyze this, it would not be very helpful: reality is moving on, and complexity is added on a daily basis. In a competitive world with tightly fought margins we cannot expect the complex processes to be stable over time. The opposite is true: the speed of change is even increasing in many domains. 4.3. Acceleration of interconnectedness and complexity The exponential growth of Moore's law has boosted performance and minimized the size of microelectronics. The availability of ever smaller and more powerful digital technologies has also accelerated other areas such as climate modeling, agriculture, industry automation, material sciences, genetics, economic assessment, finance, transport, construction and many other sectors. In addition, modern information technology has created a wealth of business opportunities for the digital economy. Smartphones put the information of the internet at our fingertips, social networks arose, satellite navigation systems helped with orientation and timing, digital imaging and new sensors gave us a better picture of the world, and all of these results can be joined into what we call big data. In December 2015 the international science community, Science International, published a joint statement, on Open Data in a Big Data World: An international accord[31]. They identified the opportunities and challenges of the data revolution as today's predominant issue for global science policy and proposed some fundamental principles, noting that the scientific community has a distinctive voice. The acceleration of all of these sectors has also changed many business models, which has two negative consequences for the resilience of modern society. Firstly, there is a stronger dependency of almost all of the processes of our daily life on very few players, and secondly – though associated to the first effect – we can observe a more and more uneven distribution of profits, leading to tensions in societies. Dependency has been created by new concepts such as Information as a Service (IaaS) or Software as a Service (SaaS), binding customers to suppliers in a far stronger way than the traditional model of producing and selling. Ten years ago we would buy a CD and own it, whereas today we need to sign up to music platforms which provide us with the desired content – and monitor our behavior continuously. The associated business models are pushing into other sectors of industry. Traditional companies in the automotive sector have to face competition from IT companies developing autonomous driving, thereby harvesting even more data. E-books are so convenient that hardcover and paperback revenues are sharply declining, non-digital photography has almost disappeared and smart phone apps are replacing travel agencies and taxi companies. This digital acceleration might be creating more choices for the customer, but comes at the price of dependency on very few digital players. In addition to this dependency, which is detrimental to resilience, there is a mid-term issue with wealth distribution: the agreed measure for macroeconomic growth is still GDP, which does not contain any fairness component. So we are striving for economic growth, sometimes also for inclusive growth, but not necessarily for a fair distribution of growth. An example illustrates the differences: from 2007–2015, a period covering the financial crisis, the OECD countries on average experienced moderate growth in terms of GDP [32], but the general aggregate is not telling a lot. The GDP per capita of different countries developed quite differently, and in 2015 Germany and Greece were at 107.65% and 76.75% of their 2007 values, respectively. This created significant political tensions, and is not expressed in monitoring the aggregate OECD total (which is 106.45%). But the problem also exists at national level: the majority of EU households might not agree on having experienced any economic growth since 2007, but would rather recall austerity measures, income cuts, and tax increases. The growth measured must therefore have arrived in other places – but we do not have detailed, up-to-date statistics on this. Some evidence originates from a study [33] of the European Central Bank (ECB) in 2013, comparing the mean and the median values of household wealth in the Eurozone and coming to the conclusion that fairness has suffered. Germany's households, for example, are on average (mean) comparably well-off, but the difference between the mean household wealth and the median one is the largest in Europe, indicating significant unfairness in the detailed distribution. A very clear analysis of the ECB study can be found in [34]. In addition to potential tensions in society, the risky business models leading to uneven distribution are undermining resilience even further. We were reminded during the financial crisis that our modern world is targeted at short-term profit, possibly at the expense of the system, and that governments have to intervene if society is not to end up paying the price of excessive risk taking by comparably few market players.. This strategy of leaving behind the risk for the bank (or afterwards for the government and for society) should have been known well since February 1995, when Barings Bank, the oldest UK merchant bank, was brought down by a single rogue trader [35]. But in a fierce global competition every penny counts, and we cannot expect our job-creating entrepreneurs to give way to competitors for fairness's sake. Production lines of companies are transferred for profitability reasons from Central Europe to Eastern Europe, later to China and from there to Vietnam. Domestic jobs are lost and costs are being saved, while dependencies rise and unfairness increases. So a certain share of the digital revolution may just be a silent conversion of thousands of jobs into an enormous cash flow towards the few big digital shareholders. The evolution of wealth distribution in the US is very telling, and the perceived rule of billionaires has even been exploited with some success by Bernie Sanders in his 2016 US presidential candidature campaign for the Democrats. Europe also needs to monitor its trends very carefully. The situation of many young Greek graduates without a job, in combination with loopholes for the wealthy in the national tax regime (or its enforcement) has already created massive tensions, led to government changes and to discussions with EU partners, put pressure on EU solidarity and weakened EU resilience during the financial crisis. 5. Discussion 5.1. Current situation When analyzing the resilience of our modern and complex society, we start from the UNISDR Terminology on Disaster Risk Reduction [36], defining resilience as 'The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.' The United Nations’ definition has an important addendum, expressed by the following note: 'Resilience means the ability to “resile from” or “spring back from” a shock. The resilience of a community in respect to potential hazard events is determined by the degree to which the community has the necessary resources and is capable of organizing itself both prior to and during times of need'. This notion of springing back from a shock is nicely expressed as 'Why things bounce back' by Zolli and Healy [37], who formally define resilience as 'the capacity of a system, enterprise, or a person to maintain its core purpose and integrity in the face of dramatically changed circumstances'. For a resilience assessment we therefore need to understand both the change we are exposed to and our capability to cope with it. Are we already living in dramatically changed circumstances, are dramatic changes just ahead of us, or will there be a dramatic change only at a more distant point in the future? Comparing the world of today with the world in the late 1980s, we can see huge differences, e.g. in globalization and in digitization, but there are also many areas that have remained comparably stable, such as peace in Central Europe, the economically strong position of the US, the mechanisms of the United Nations, or the simple fact that the majority of our cars still run on four wheels and are fueled by hydrocarbons. Dramatic changes there have been, but often not arriving with a big bang, but silently inserting themselves into our daily lives (e.g. the internet). The process is continuing and accelerating. Our capacity to 'bounce back' – or more formally to cope with dramatic change – is also difficult to assess. There is no formally agreed measure for resilience that could serve as a benchmark, but we have created powerful political processes to cope with change globally, such as the Sustainable Development Goals [38], the Paris Climate Agreement [39], or the global Sendai Framework for Disaster Risk Reduction 2015–2030 [40]. The latter includes in its Priorities for Disaster Risk Reduction, the statement 'Enhancing disaster preparedness for effective response, and to ‘Build Back Better’ in recovery, rehabilitation and reconstruction'. The Sendai Conference included a session on Disaster Risk in the Financial System which concluded that, by 2020, 1-in-100 and 1-in-20 risk analyses should be developed to enable the understanding of levels of resilience across all capital and support the adoption of standards by global regulators. These international agreements were all made in 2015 but it is notable that all of these instruments and procedures were the culmination of decades of work. The Paris agreement (called COP21 because it was signed at the 21st annual meeting of the Conference of the Parties of the UNFCCC) was preceded by the Kyoto [41] climate agreement of 1997 and its Doha amendment [42] of 2012. The Sendai Framework was preceded by the 2005 Hyogo Framework for Action [43]. The sustainable development goals were preceded by the original Millennium Development Goals [44] of 2000. Altogether, the international community has been working on resilience for at least 20 years in quite a determined way. Nevertheless, while global agreements on resilience and sustainability have been concluded over the last 20 years, the exploitation of resources has continued, and our remaining planetary reserve has been depleted more and more. Significant economic development took place and growth was achieved in many regions of the world, including places like China, Brazil, India and South Africa, the OPEC countries, Southeast Asia, but also in Europe, Australia and in North America. However, much of this growth was accompanied by massive exploitation of natural resources, often associated with major catastrophes. Offshore drilling created disasters like the Deepwater Horizon incident with an estimated settlement of approximately $7.8bn [45]. Massive irrigation caused a significant loss of natural water reservoirs and dried out the Aral Sea [46], and biodiversity is decreasing at a speed that made Chapin et al. [47] request the establishment of a new international body to assess changes in biodiversity already in 2000. Our complex technology has created nuclear incidents with global impact, such as the Fukushima meltdown in 2011. Even our technological progress in successfully exploring space has left so much space debris behind that it will jeopardize the success of future missions, and Hall states in [48]'… the space community is realizing that the failure to solve the problem would be disastrous.'. The role of media in these changes is complex, but important. On the one hand the mass media, often powered by an explicit political agenda, can choose to sensationalise some aspects of global risks while concealing others, thereby aggravating the problem and making it more difficult for society to find solutions; on the other hand the media – especially modern social media – can create awareness and encourage solutions. In modern democracies there should be no compromise with the principles of free speech, even where the effect may be destructive; but responsible media leaders, journalists and other commentators can be encouraged to understand the risks and help towards mitigating them. Other important factors are known but cannot be reliably predicted: the geopolitical power balance, the strength of the influence of supranational organizations and institutions, or the power of the civil society play an important role when assessing the risk of societal collapse. The authors acknowledge that these factors – as well as other drivers such as cultural, religious or historical developments – should be considered in a comprehensive assessment but go beyond the scope of this article. 5.2. Key questions Starting from the above definitions, the key questions when looking at the resilience of our current societies are (i) how much flexibility do we have left, and (ii) how can we carry on from today. It seems particularly with regards to global energy needs that whatever coping capacity is left on our planet (e.g. shale gas or nuclear fusion energy) will either be exhausted very soon or contribute to a further acceleration of the negative effects. Therefore, unless we can decouple growth from the use of resources, we are heading for, at worst, a crash, or at best an unpleasant downward spiral, even though currently the slope is still pointing up. Ehrlich [49] concludes that our modern society has a different risk of collapse than former societies which collapsed locally or regionally only. He claims that complex, multi-level systems may be better able to cope with complex, multi-level problems, but we fear that this statement only holds up to a point where the complexity of systems itself becomes an additional risk. Carrying on from today is even more difficult. Our short-term thinking often limits our vision to the next few years, and although we could still change course, we rather exercise ourselves in denial and promises of continuous and never-ending growth, missing the point that even the growth we are experiencing today is more and more unfair and therefore already eroding our social solidarity and, as a consequence, our resilience. Diamond [50] has analyzed the differences between today's dangers and the dangers that past societies faced, and identified twelve main problems specific to the world of today, including inequality. He also researched why many of the formerly ruling societies failed to recognize that big problems were looming up before they fell, and concludes that this reflex of denial has not changed over the centuries. We enjoy the speed and acceleration – but can we distinguish between the thrust of the engine and the free fall as we go over the cliff? Currently we simply try to outperform each other on speed, and leave it at that. The interconnectedness, complexity and acceleration of our modern society have brought us to the limits of exponential growth and have simultaneously exhausted the resources of the planet in several dimensions, weakening our resilience. To capitalize on what is left of it, a major rethink in society is required. In a fierce global competition such reconsideration will clearly not happen on its own, but needs to be accomplished by the right incentives to avoid unnecessary interconnectedness, reduce systemic complexity and slow down an acceleration that cannot be maintained forever anyway. But how can we achieve this? Key elements for accomplishing this challenge will be decoupling growth from consumption, introducing more fairness into the system and identifying and mastering risk. Especially this last requires a better understanding of risk in our complex systems, especially if there is a risk of major systemic failure. In addition, we need to prevent the transfer of systemic risk to less knowledgeable stakeholders (the general public, the taxpayer, etc.) not connected with the original transaction in which the risk was created. 5.3. Suggestions for a way ahead We therefore suggest three initiatives to lay the ground for an economy and society aiming at sustainable wealth rather than chasing for unrealistic never-ending growth, turning from a continued depletion of resources to a resilient continuum. The initiatives are not meant to suffocate or kill the economy but to move it rapidly from a destructive and short-term mode to a long-term healthy equilibrium. This might sound ambitious, and might be perceived as threatening by the homo economicus of our modern days, but any profit-oriented activity has long had to consider political side constraints, and moving the incentives to different objectives will only regulate markets in the desired direction, not abolish them or move to socialism. History shows that with the right incentives a single human generation is sufficient not only to turn the mindset of modern society but also to create a highly competitive technology position in the markets. Between 1970 and 2000, environmental thinking in Europe and in the US was fostered by regulators, civil society and industry altogether, and created new markets and green growth to the benefit of nature. Another example, still ongoing, is the global effort on CO2-reduction and climate change agreements, which started roughly 15 years ago and has made significant progress with the COP21 agreement of 2015. Science will have to play an important role in this respect, and a number of international initiatives with scientific involvement have already been started in the related area of sustainability. The International Council for Science (ICSU), UN agency partners and other non-governmental organizations including the International Social Sciences Council, Sustainable Development Solutions Network and Science and Technology in Society Forum, with the World Business Council for Sustainable Development (WBCSD) as an observer, have created a new global research program Future Earth: Research for Global Sustainability[51]. The goal is to provide the knowledge required for societies in the world to face risks posed by global environmental change and to seize opportunities in a transition to global sustainability. The Integrated Research on Disaster Risk Programme (IRDR) [52] (focusing on 'natural' hazards) is another approach to research on disaster risk through an international, multidisciplinary (natural, health, engineering and social sciences) collaborative programme. The Program has created IRDR International Centres of Excellence such as one on Vulnerability and Resilience Metrics and another on Disaster Resilient Homes, Buildings and Public Infrastructure. Another newly-started research programme, recognizing the importance of the urban scene and health is Urban Health and Wellbeing[53], which is an interdisciplinary research effort whose overall aim is to generate policy-relevant knowledge that will improve health status, reduce health inequalities and enhance the well-being of urban dwellers. It will focus on systems approaches to address the complexity of urban issues and their influence on health. The International Council for Science is working with UN agencies to bring together the science from these three international research programs in an integrated way to provide advice to the Climate Convention, the Sendai Agreement, the Sustainable Development Goals and other international issues. The next thirty years should be sufficient time to instill a sustainability and resilience philosophy into policies, civil society and the economy – turning from unfair growth to healthy growth. The start of any such initiative could even bring direct economic benefits: The World Business Council for Sustainable Development identified significant business opportunities in sustainability, and underlines the importance of being first in the green race [54], and first business models in creating a sustainable future have already emerged [55]. This means we have arrived at a point where not acting might make us fall behind. With the right political, economic and societal incentives, resilience will pay off, whereby it will no longer be economically viable to go for extreme risks (as the consequences could not be passed on to others). The following three suggestions by the authors are meant to support a sustainable and resilient society, and are derived from the analysis above: (1) Cut down interdependencies by putting incentives to avoid business models which – create unnecessary global interdependencies, – do not create local jobs (or no jobs at all), – force people to move, – limit customer choices and flexibility without a need, – exploit the weakest parts of society. (2) Reduce complexity by putting incentives to avoid business models which – create unnecessarily complex procedures, – transfer risk into remote places, to the taxpayer, or to less knowledgeable parties – gamble on rights not being enforceable, – exploit taxation loopholes or taxation enforcement weaknesses. (3) Stop the acceleration of interconnectivity and complexity by putting strong economic incentives for simple business models creating local or community benefit. Research can make a major contribution to setting the right incentives, as nowadays many traditional concepts are not fit for purpose, and new ways of measuring resilience, fairness and sustainability need to be established. We therefore suggest developing a scientifically solid measure for fair GDP (FGDP) as an internationally acknowledged benchmark for growth to avoid extreme inequality and tension in societies. In addition, initiatives to measure resilience of societies in their multidimensional facets, trying to identify drivers of fragility as well as tipping points for slowly increasing instability, are recommended. 6. Conclusion The world has come to an unprecedented status of interconnectedness and complexity, both growing at an enormous speed, and it urgently requires a transition from short-term thinking to sustainable resilience. Such a change needs to be triggered by the right political, economic and societal incentives. There are clear ways ahead, but they need to be accompanied by organized support from the stakeholder groups involved. It will require a joint effort of public authorities, civil society, industry, and academia to lead the global transition towards a resilient society, offering fair long-term growth in a healthy and sustainable societal equilibrium.

#### 2. long-term structural weakness

Ben-Ami, 20—Deputy Editor, Investment & Pensions Europe (Daniel, “A precarious balance,” <https://www.ipe.com/comment/a-precarious-balance/10042965.article>, dml)

There will undoubtedly be another meltdown. However, it is impossible to say for certain whether it will hit next month, next year or in the next decade. Both the world economy and financial markets are suffering from long-term structural weaknesses. These are not the normal end-of-cycle excesses but problems that have built up over decades.

Productivity growth and economic growth in the western developed economies have trended downwards since the 1970s. Business investment is also anaemic. In the financial sphere, real interest rates have fallen since the early 1980s. For more than a decade quantitative easing has helped stave off financial collapse, while in the process giving policymakers space to avoid tackling the underlying problems. The volume of negative yielding debt has reached vast proportions.

Investors tend to underestimate these problems because of the narrowness of their perspective. They generally have a short-term focus on cyclical rather than secular developments and they typically pay little attention to the productive world of the real economy.

The challenge facing those who are aware of these trends is not predicting the next crisis but explaining why one has not happened already. On the face of it a meltdown is long overdue.

Probably the main reason for the delay is the high level of international cooperation. Western leaders have learnt from the terrible experience of the prelude to the world wars that there is much to be gained from working together. It gives the global economy far more resilience than it would have otherwise.

A related development is the rise of China from marginal economy to global giant. China’s increasing strength has helped to offset the weaknesses of the western economies.

The key problem now is that relations between the large economies are looking frayed. Although the focus is on trade there are also many disputes on topics as varied as investment flows, technological supremacy, espionage and cyberattacks.

It is all too easy to blame Donald Trump for heightened tensions since he is the most prominent advocate of a unilateral world view. However, the divisions cut much deeper. His crusade against China has broad support from across the US political class while Europe too is hardly averse to protectionist measures.

The rise of populist movements also gives governments less room to manoeuvre internationally. Policymakers face a difficult balancing act between keeping their domestic populations happy and cooperating with other nations.

Our current equilibrium looks increasingly precarious.

#### 4. Biophysical minimums make consumption inevitable

Ward, et al, 16—School of Natural and Built Environments, University of South Australia (James, with Paul Sutton, Department of Geography, University of Denver, Adrian Werner, School of the Environment and National Centre for Groundwater Research and Training, Flinders University, Robert Costanza, Crawford School of Public Policy, The Australian National University, Steve Mohr, Institute for Sustainable Futures, University of Technology Sydney, and Craig Simmons, School of the Environment and National Centre for Groundwater Research and Training, Flinders University, “Is Decoupling GDP Growth from Environmental Impact Possible?,” PLoS One11.10 (Oct 2016))

For non-substitutable resources such as land, water, raw materials and energy, we argue that whilst efficiency gains may be possible, there are minimum requirements for these resources that are ultimately governed by physical realities: for instance the photosynthetic limit to plant productivity and maximum trophic conversion efficiencies for animal production govern the minimum land required for agricultural output; physiological limits to crop water use efficiency govern minimum agricultural water use, and the upper limits to energy and material efficiencies govern minimum resource throughput required for economic production. Therefore a more appropriate formulation of Eq (4) is to allow Tj to decrease to an ultimate value, Tult ≥ 0, as follows: (5) where Tj,ult is the ultimate resource use intensity, and rj is the rate of exponential decline, for resource or pollutant j. In cases where decoupling is occurring, Tj,ult < Tj,0. However, cases where resource use intensity is increasing towards an upper limit can be accommodated with Tj,ult > Tj,0.

### 2NC --- transition

#### 2. global support is latent now – transition is waiting to happen

Kirk, 18—Co-founder and Director of Strategy for The Rules, former Head of Campaigns at Oxfam UK and Head of Global Advocacy for Save the Children, citing a study by Rodolfo Dirzo and Paul Ehrlich from the Stanford Woods Institute for the Environment and Gerardo Ceballos of the National Autonomous University of Mexico (Martin, “What if economic growth isn’t as positive as you think?,” <https://www.fastcompany.com/90202203/what-if-economic-growth-isnt-as-positive-as-you-think>, dml)

But there are some new strains of thought that take a more nuanced and sophisticated view of growth. That say, yes, all other things being equal, economic growth is a positive thing. But all other things are not equal. There’s no such thing as a free lunch, and, for all its positives, economic growth has a dark side; its ecological impact. The impacts of our ever-growing economy have become so stark and so widespread that they are by any sane measure portents to catastrophe. Whether it’s the fact that Antarctic ice is now melting three times faster than we thought, or the unfolding “biological annihilation” that has already wiped out 50% of all animals and up to 75% of all insects, or the fact that, in spite of all this, we are pumping out CO2 at record levels, it takes willful ignorance or a blinding ideology to deny the severity of the crisis.

This creates a terrible paradox: Economic growth keeps economies stable today, but threatens not just future growth but medium-term social and civilizational cohesion, and ultimately the very capacity of this biosphere to sustain life. A paper published in the Proceedings of the National Academy of Sciences last year suggested that “the window for effective action is very short, probably two or three decades at most.” And that even this dire prediction is considered “conservative” by the authors, “given the increasing trajectories of the drivers of extinction.” In terms of practical politics, that means acting immediately, preferably yesterday.

Most politicians deal with this paradox by ignoring it. It’s by far the easiest option; one afforded every incentive and reward by this political economy and the beliefs that underpin it. This belief system has been dominant for a long time now. We are, as a society, deeply comfortable with it, which means many of its core assumptions are considered unassailable–too obvious to question. The most profound being this idea that growth is always good. Questioning this amounts to political suicide for any politician.

Or, at least, it used to. We are starting to see some movement in interesting corners of the global political landscape that suggest that some leaders are showing the sort of political courage needed to shift established norms. It may well be starting to become something of a bonafide political movement. It’s young and small, still, but so were all movements at one time.

A little thought experiment shows how growth can be a problem: Insert the word “a” before it. “A growth.” That feels very different from just “growth,” right? Growth is a big part of what we all understand happens in a healthy life. Children grow, knowledge grows, love grows. But “a growth” is what happens when life gets corrupted. “A growth” is when the growth is unchecked, and thus a symptom not of health but disease; when it takes on the character of an invader, attacking its host. The word for growth that gets out of control in this way, such that it becomes “a growth,” is, of course, cancer.

But wait, I hear you cry, technological progress will save us! We can just grow meat in test tubes rather than needing so much land and clean air space for cows and their methane-laden farts, or we can all switch to renewable energy, or recycle more and better, and then we can get back to the promise of infinite growth. Unfortunately, the evidence is clear that this is simply not possible. Yes, we can make dents in our impact with such measures, and we should with all possible speed, but the way the global economy is currently programmed means such things are important–but also entirely insufficient.

So, once we discard the vain hope of being able to grow the economy infinitely and indefinitely, what are we looking at? This is where the innovation and bravery come in.

A new alliance was formed in 2017, called the Wellbeing Economy Alliance. What they are shooting for is one–or many different–economic model(s) that have, “the fundamental goal of achieving sustainable well-being with dignity and fairness for humans and the rest of Nature.” Which means they cannot just reach for socialism or any other historical model–socialism, like capitalism, relies on growth, as does communism. They have recognized that we can’t rely on past thinking; we must genuinely put our best brains forward and innovate.

We’re not talking about a bunch of random, dreamy utopians here, but real politicians who have won real elections and are exercising real power. So far, the roster of governments signing up to the Alliance includes Scotland, Costa Rica, Slovenia, and New Zealand. Other governments that are actively looking at the issue include Italy, and there are political parties emerging, like the Alternative Party in Denmark, which is also embracing the innovation challenge. These are not what are often referred to as Tier 1 countries in the international order, but neither are they so small they are irrelevant.

Scotland, for example, provides a direct line into both the U.K. and (at least for the time being) the EU. Costa Rica has long been a pioneer of innovative economic and social thinking, with impressive results: It is routinely in the top three countries in the world when measured for the well-being and happiness of their people. New Zealand is, perhaps, the most newly bold. Its prime minster has not only called growth-at-all-costs capitalism “a “blatant failure” but also has said her government would no longer accept GDP as the sole, supreme measure of progress. “The measures for us have to change,” she said in October last year. “We need to make sure we are looking at people’s ability to actually have a meaningful life, an enjoyable life, where their work is enough to survive and support their families.”

And this is where social and economic forces start to align in very interesting and potentially powerful ways. And open the door for seeing electoral strategies in an agenda based on innovations to take us beyond traditional growth-at-all-costs economics.

Consider a few facts: More than 50% of millennials say they would take a pay cut to find work that matches their values, while 90% want to use their skills for good. And these trends are on the up. Deloitte’s 7th Annual Millennial Survey of 12,000 young people, for example–both millennials and gen Z–reports record low opinions of businesses

. Fewer than half now believe that businesses behave ethically, and this directly affects how loyal they feel to their employers; 43% of millennials and a whopping 61% of gen-Zers expect to stay in a job no more than two years. And all this against a backdrop of general public opinion that is also looking increasingly unkindly on the economic paradigm we have.

These are conditions that can be worked with. They show that there is a large and growing instinct out there that thinks that we need fundamental change to the way we do economics. Not tweaking around the edges, but fundamental change at the very roots of the global economy. There is no neat or reliable evidence to suggest that challenging infinite growth is at the top of peoples’ minds, or likely to be a particularly easy sell. But there is significant doubt in growth-at-all-costs capitalism, and that is an opportunity for innovation. Combine that with the new thinking coming out of places like the Wellbeing Alliance, and you can start to sense the causes and conditions may well be aligning in favor of the emergence of wholly new, post-growth economies. It cannot come soon enough.

### 2NC --- AT: decoup

#### Decoupling is wrong. Best studies go neg. Aff data ignores *offshoring*

Sandberg 18 (Maria Sandberg, Hanken School of Economics, Department of Marketing; Kristian Klockars, Social and Moral Philosophy, Faculty of Social Sciences, University of Helsinki; Kristoffer Wilén, Hanken School of Economics, Department of Marketing, “Green growth or degrowth? Assessing the normative justifications for environmental sustainability and economic growth through critical social theory”, Journal of Cleaner Production, 2018, DOI:10.1016/j.jclepro.2018.09.175)

Green growth, and in particular, decoupling, has been criticized for being unsuccessful in stopping environmental degradation (Fletcher and Rammelt, 2017; Jackson, 2016; Kallis, 2017a; Wiedmann et al., 2015). Jackson (2016) analyzed historical data on greenhouse gas emissions, material footprints, and resource extraction. He concluded that there is no evidence an absolute decoupling of economic growth from the use of natural resources is taking place. Calculating the material footprint of nations, Wiedmann et al. (2015) showed that no decoupling, absolute or relative, has been achieved in the last two decades in developed countries; any previous indications of decoupling were shown to be due to calculations that failed to incorporate the full environmental impact of increased offshore production.

Furthermore, Jackson (2016) calculated the required future reductions in resource use per unit of economic activity for a number of different scenarios, showing that absolute decoupling in a growth economy would require improvements in efficiency take place at unprecedented rates. Even the most conservative estimates indicated a required rate of at least ten times what has historically been achieved. Jackson concluded that improvements in efficiency are highly unlikely to reach rates high enough to achieve absolute decoupling in the future. It has been argued that efficiency improvements alone are unlikely to reduce the use of natural resources to the extent necessary and at the required time scale (IPCC, 2014) to stop environmental degradation.

### 2NC --- AT: CCS

#### 1. Reliance on negative emissions technology causes a moral hazard and isn’t feasible

--NETs = Negative Emissions Technologies

--BECCS = Bioenergy with Carbon Capture and Storage

Tim Pfefferle 16, M.S. in Global Governance and Diplomacy from Oxford University, 12/14/16, “The Paris Climate Plan is on Life Support: Can Negative Emissions Deliver on Global Climate Ambitions?” <https://www.greeneuropeanjournal.eu/the-paris-climate-plan-is-on-life-support-can-negative-emissions-deliver-on-global-climate-ambitions/>

NETs are measures to take carbon out of the air after the fact. There is a variety of ways to go about doing that. Carbon Brief, for example, lists ten different NETs. These range from reforestation to tinkering with the composition of ocean water and agricultural soils. A number of these technologies are really quite speculative and many years away from development.¶ The most promising NET is called bioenergy with carbon capture and storage (BECCS). This involves burning biomass and subsequently storing the resulting emissions. Effectively, this takes carbon out of the air. While BECCS may sound like a pipe dream, we already assume that it can be deployed successfully. 101 of the 116 IPCC scenarios that achieve a “likely” chance of staying below 2°C rely on BECCS. In two thirds of them, BECCS would account for at least 20 percent of the world’s primary energy by the end of the century. Through the backdoor, NETs have become a central part of global climate plans. In fact, it’s the dirty secret of the Paris deal.¶ So far there have been few other success stories when it comes to NETs. Scientists who have looked at the current state of negative emissions technologies conclude that “there is no NET … currently available that could be implemented to meet the <2°C target without significant impact on either land, energy, water, nutrient, albedo or cost”. Therefore, the researchers say, reducing greenhouse gases as much as possible should be the main focus.¶ Andy Skuce notes in the Bulletin of Atomic Scientists that “human beings would have to develop a huge carbon capture and sequestration industry that is about triple the size of the entire current fossil fuel industry”. That translates to building 250 such plants every year for the next 70 years. Currently, there are 14 of these plants – worldwide.¶ Beyond technical challenges, there are also policy problems. NETs entail a moral hazard. Just like buying insurance for your house or car may make you more reckless, the same conundrum applies to atmospheric safeguards such as NETs. If we think that carbon can be removed from the air after the fact, the incentive to reduce emissions consequently goes down. Simply relying on NETs might just lock us in to our current carbon addiction.

#### 2. They fail — resource limits, financial costs, side effects, and political will — immediate emissions reductions are necessary.

Fuss et al. 18 — Sabine Fuss, Mercator Research Institute on Global Commons and Climate Change, with William F Lamb, Mercator Research Institute on Global Commons and Climate Change, and Max W Callaghan, Mercator Research Institute on Global Commons and Climate Change, School of Earth and Environment of the University of Leeds, and Jérôme Hilaire, Mercator Research Institute on Global Commons and Climate Change, Potsdam Institute for Climate Impact Research, and Felix Creutzig, Mercator Research Institute on Global Commons and Climate Change, Technische Universitat Berlin, and Thorben Amann, Universitat Hamburg, and Tim Beringer, Mercator Research Institute on Global Commons and Climate Change, and Wagner de Oliveira Garcia, Universitat Hamburg, and Jens Hartmann, Universitat Hamburg, and Tarun Khanna, Mercator Research Institute on Global Commons and Climate Change, and Gunnar Luderer, Potsdam Institute for Climate Impact Research, and Gregory F Nemet, La Follette School of Public Affairs of the University of Wisconsin–Madison, and Joeri Rogelj, ENE Program at the International Institute for Applied Systems Analysis (IIASA), Institute for Atmospheric and Climate Science at ETH Zurich, and Pete Smith, Institute of Biological and Environmental Sciences at the University of Aberdeen, and José Luis Vicente Vicente, Mercator Research Institute on Global Commons and Climate Change, and Jennifer Wilcox, Department of Chemical and Biological Engineering at the Colorado School of Mines, and Maria del Mar Zamora Dominguez, Mercator Research Institute on Global Commons and Climate Change, and Jan C Minx, Mercator Research Institute on Global Commons and Climate Change, School of Earth and Environment of the University of Leeds, 2018 (“Negative emissions–Part 2: Costs, potentials and side effects,” *Environmental Research Letters*, Volume 13, Issue 6, Available Online via IOP Science at https://iopscience.iop.org/article/10.1088/1748-9326/aabf9f/meta, Accessed 04-06-2019, pg. 29-35)

Note: BECCS = Bioenergy with Carbon Capture and Storage; DACCS = Direct Air Carbon Capture and Storage; AR = Afforestation and Reforestation; EW = Enhanced weathering; SCS = Soil Carbon Sequestration; NET = Negative Emissions Technology

4. Synthesis

In this section, we synthesize the findings from the different NETs assessments in section 3 and situate them in the scenario evidence from section 2. Figure 14 and table 2 show the ranges for the global potentials and costs in 2050 and distill the main side effects, subcategorized as either positive, or at risk of being negative. We condition the cost and potential ranges with the authors’ assessments (summarized in the central plot in figure 14). These assessments should be interpreted as deployment ranges that are feasible in the context of generally favorable conditions, i.e. long-term policy support, with key decisions made in the technology cycle and deployment phase to generate demand pull, and few social, economic or environmental shocks in the relevant agricultural and land use sectors33. One aim of this review is to comprehensively cover the relevant literature based on a transparent literature search and selection process (see SI). We therefore also compare our results with those from existing, previous assessments.

4.1. Potentials

The deployment potentials in previous NETs assessments vary considerably across studies. This study spans the entire ranges of estimates for all individual NETs reported in these previous assessments (Royal Society 2009, McLaren 2012, Friends of the Earth 2011, Vaughan and Lenton 2011, McGlashan et al 2012, National Academy of Sciences 2015, Caldecott et al 2015, Fuss et al 2016, Smith et al 2016a, Rubin et al 2015, Ciais et al 2013, Lenton 2010). This overlap, in principle, confirms the ambition of this review to provide comprehensiveness, yet it does not ensure that estimates are weighted according to the distribution of evidence. In the absence of comparable efforts, this can only be judged in terms of the review procedure: our general approach is summarized in Minx et al (2017) and outlined in detail in the SI of this review.

Land-based mitigation options including biochar, AR, EW as well as SCS each have a potential in the range of 1–4 GtCO2 yr−1 in 2050—noting that achieving the higher end of the ranges gets increasingly demanding and will require higher carbon prices. There is considerable disagreement about reasonable deployment potentials for BECCS and skepticism that deployment ranges as seen in many scenarios can be reached. To our judgment, due to constraints on the availability of sustainable biomass, it will be extremely difficult to achieve annual carbon removal rates of 5 GtCO2 with this technology by mid-century; however, end-of the-century potentials might be considerably higher, assuming that population peaks and reduces pressure on land, alongside further yield improvements. DACCS deployment will heavily depend on suitable energy sources and cost developments. Given its nascent stage of development, it will be an option with limited potential in 2050. Yet, if DACCS becomes competitive, potential deployment will be driven by cost support and rates of upscaling, with no obvious upper biophysical limit, barring storage, material and thermodynamic constraints.

Whether these deployment potentials are well-aligned with requirements identified in long-term mitigation scenarios consistent with the 1.5 ◦C and 2 ◦C scenarios, respectively, is questionable. This review shares the wide-spread concern that reaching annual deployment scales of 10–20 GtCO2 yr−1 via BECCS at the end of the 21st century, as is the case in many scenarios, is not possible without severe adverse side effects. Deployment scales reached in 2 ◦C scenarios with limited BECCS deployment (corresponding to about 100EJ of bioenergy) appear to be more realistic. Opportunities for reaching larger deployment scales emerge when NET portfolios composed of the various technologies—rather than a single technology—are developed and scaled-up over time. A discussion and synthesis of development and upscaling bottlenecks are provided in Nemet et al (2018) and Minx et al (2017), respectively. Such a discussion of NET portfolios with a variety of technologies contributing potentially at more modest scales is important, but almost completely absent from the discussion and the reviewed body of literature. Exceptions such as in (Strefler et al 2018a) confirm that adding other NETs (in this case terrestrial enhanced weathering) to BECCS can substantially reduce side effects (in this case reduce the land footprint, while still reaching considerable negative emissions potentials).

However, the deployment scales of individual technologies cannot be simply added up: first, some technologies or practices compete with one another for resources, e.g. land in the case of afforestation, reforestation and BECCS; and competition for biomass in the case of soil carbon sequestration, biochar and BECCS (high biomass extraction rates for BECCS will undermine the build-up and retention of soil carbon via sustainable management practices, or via biochar production). Second, scenarios that deploy small portfolios of two or three NETs show that adding another technology raises deployment, but at a decreasing rate,

i.e. NETs deployment is lower for each technology when two or more rather than a single technology is deployed (even if technologies are of very different types such as BECCS and DACCS (or EW)) (Marcucci et al 2017, Humpenoder ¨ et al 2014, Chen and Tavoni 2013).

Beyond 2050, long term cumulative potentials are a function of scalability and sink saturation. We summarise these in figure 14 by indicating the expected post-2050 trend in costs and potentials for each technology (qualitative arrows in the top-right of each sub-figure). In the case of land-based options, these constraints are severe. For instance, although SCS has a very high mid-century potential (4–7 GtCO2 yr−1)—and can be quickly realised through changes in farming and land management practices—after consistent application the sink will saturate within ∼20 years and will require on-going maintenance. Biochar is similarly constrained in terms of saturation, although few studies yet point to the total feasible sink potential. Cumulative afforestation potential is constrained by available land, with newly afforested sites saturating within ∼100 years. We might then consider these three options ‘21st century NETs’: promising stop-gaps, but limited in long-term potential.

While our review highlights the limitations of BECCS, unlike other land-based options it does not saturate as quickly over time. The cycle of biomass production and sequestration could conceivably continue up to the point that geological storage potential is maximised, thereby sequestering a large cumulative amount of CO2. However, BECCS is constrained to maximum yearly potentials, as determined by a sustainable scale of biomass production on land (though as mentioned previously, technological progress and a population peak could ease this pressure, allowing for more annual CO2 uptake). Lastly, DACCS emerges as a relatively promising long-term option beyond 2050, being limited in potential only by the economic (and energetic) feasibility of scale-up. 4.2.

4.2. Costs

Costs impose further economic limits to NETs deployment (see Smith et al 2016a). Across technologies, costs vary significantly (figure 14). Particularly, land management options like soil carbon sequestration, biochar, afforestation and reforestation have a smallscale availability at low, zero, or even negative costs in places. Yet, despite technology cost reductions from learning, the marginal costs of abatement tend to increase with deployment, particularly for land management options such as afforestation and reforestation (due to opportunity costs for land) and soil carbon management (due to the exhaustion of cost-efficient ‘low-hanging’ management options). Hence we see these options increasing in costs beyond 2050 (figure 14). On the other hand, biochar may offer some prospects for modest cost decreases as pyrolysis techniques are still in their infancy and may yet benefit from scale and learning dynamics.

Enhanced weathering is a relatively expensive option due to the high energy requirements for grinding the minerals to sufficiently small size. Hence, carbon prices of US$50 and more are required if larger deployments are to be reached, with prices progressively increasing as proximate mining and deployment locations are exhausted. On the other hand, less developed technologies like BECCS and DACCS (Nemet et al 2018) are comparatively costly (US$100–200 and US$100–300/tCO2, respectively), but once available can be more easily scaled up—particularly in the case of DACCS. The long-term cost trends of BECCS are a matter of significant uncertainty—in the literature and within the authors’ assessment— as they are shaped by multiple dynamics. Principally these include the opportunity costs for land and biomass, prospects for biomass yield increases and alternative sources (e.g. algae), and the prospects for bringing down plant costs via scaling and technological learning. However, beyond a deployment level of 5GtCO2 yr−1, we judge costs to increase as pressures on land and biomass progressively grow, albeit with a heavy caveat of uncertainty. With DACCS, however, the literature is strongly suggestive of long-term cost decreases, albeit starting from a high level.

Overall, cost and potential considerations could suggest a natural order for phasing in different NETs—a discussion we will further elaborate in Minx et al (2017) by infusing development and upscaling considerations from Nemet et al (2018). Interestingly, these clusters of technologies also differ in terms of how securely they store carbon. While DACCS and BECCS store the carbon relatively safely mainly in geological reservoirs (Bui et al 2018, de Coninck and Benson 2014), soil and biomass-sequestered carbon are permanently at risk of rapid release, should a reversal in management decisions take place.

4.3. Side-effects

An often neglected aspect of NETs is constituted by the co-benefits they may yield. The literature shows evidence that afforestation, soil carbon management, enhanced weathering (on land), and biochar may all contribute to soil quality, nutrient retention and water cycling under appropriate management regimes. Where these changes result in enhanced crop yields, the socio-economic benefits to local and regional livelihoods may be considerable. These benefits partially explain the negative costs associated with soil carbon management, as well as its maturity and existing implementation, alongside that of afforestation. Nonetheless, there is a clear literature bias towards developed countries concerning the land-based NETs, raising an obvious need for research into the generally poorer initial site conditions and more fragile social institutions that are prevalent in developing nations. Another non-trivial consideration is whether trace-GHGs will be mitigated (potentially biochar) or intensified (BECCS) by changes to land management practices—an issue that will require concerted long-term studies to track fertilizer inputs, management practices, and resulting land-use emissions.

For most NETs, whether co-benefits or negative impacts are realized depends on implementation strategy and scale, at least in principle. For instance, monocrop plantations of eucalyptus may be an efficient means to draw down carbon, but are inferior to agroforestry initiatives when considering a broader set of social and environmental goals. More problematically, large-scale BECCS and afforestation programs will drive up demand for land, posing risks for food production, biodiversity, and land set aside for other purposes (living space, nature reserves, and other cultural, aesthetic or productive uses) (Newbold et al 2015, Creutzig 2017). As these effects play out in global markets, the broader success of largescale land-based NETs will hence crucially depend on global governance of land (Creutzig 2017). Cultivating marginal land offsets this risk, as would exploiting waste biomass feedstocks as inputs for biochar and BECCS. However, with increasing scale, the opportunities for careful implementation decline, forcing trade-offs among valued land uses, and indeed between land use NETs themselves. Another important consideration here is the direct warming effect from a changing surface albedo in Northern latitudes. This issue is principally relevant for afforestation (planting trees in in high latitudes is effectively counterproductive)— but also for biochar and BECCS, both of which will change prevailing soil and crop appearances. In addition, it is not always clear what marginal and degraded land really is and where it is, as definitions and mappings diverge widely, so the potential of biomass from marginal and degraded land is unclear34.

Given the nascent stage of direct air capture, enhanced weathering and ocean fertilization options, some side-effects are probably not yet anticipated— or have already been anticipated, but not subjected to sufficient research. Research on the side effects of direct air capture is basically non-existent. Conceivably, a large scale DACCS program will require extensive amounts of materials, and therefore mineral extraction, refining, transportation and waste disposal infrastructures. The ecological impacts of these infrastructures could be even more problematic for enhanced weathering and ocean fertilization, which would require an extensive mobilization of materials at a regional or global scale. Further issues have been anticipated for enhanced weathering (local air pollution, heavy metal pollution in soils) and for ocean fertilization (surface ocean anoxia, nutrient balance shifts, potential largescale ecosystem changes), but remain under-examined in practice.

4.4. Knowledge gaps

The systematic review of the NETs literature conducted here does not only provide us with a comprehensive assessment of their potentials, costs and side effects, but has also unveiled areas of uncertainty.

For the study of the individual options to remove carbon, all of them still need further work on estimating the economic costs (and benefits) of real world deployment and a quantification of environmental, economic and social externalities associated with deployment. This will then also enable more comprehensive modelling. In addition, there is a need to better understand the barriers to implementation of NETs and how these can be overcome. This includes research on policies, incentive schemes and finance, public acceptance, governance and actual demonstration projects. For enhanced weathering and ocean fertilisation, for instance, the largest research gap identified in this assessment is the missing existence of real field experiments. Also, potentials need to be adjusted for new insights with respect to biophysical impacts of NETs deployment (e.g. on albedo), changes in the carbon cycle caused by large-scale negative emissions (Jones et al 2016, Tokarska and Zickfeld 2015) and changes in land cover due to climate change. Finally, moving from research needs to gaps in practical knowledge, more actual pilot projects are necessary.

Other research gaps are specific to certain NETs. For example, in the case of NETs with high land requirements such as BECCS, it will be important to improve the mapping of available land, especially marginal and degraded land. To this end, harmonized definitions need to be developed and operationalized. Based on this, geographically explicit regional studies on potentials are needed. These bottom-up potentials furthermore have to be matched to the global, topdown ones. For afforestation and reforestation, for example, there are too few studies explicitly covering the tropics, yet this is the biome that global models associate with the largest carbon removal potentials. Similarly, only few studies examine the practical issues of implementing soil carbon sequestration in the developing countries, where biophysical as well as socio-economic challenges may diverge substantially from the existing knowledge base. Also in the case of enhanced weathering, proper management at the global scale would demand databases of possible application scenarios combining rock products, soil conditions, local climates and targeted plant systems.

Furthermore, there are many emerging ideas for removing greenhouse gases, some of which have been discussed in this review (e.g. methane removal), but not assessed due to smaller or more fragmented bodies of literature. As the corresponding knowledge matures and more studies on their global potentials and costs becomes available, they need to be systematically assessed as well.

Finally, for the IAMs, the following research gaps can be identified: (i) the need for integrated portfolios of NETs in IAMs, which should include an evaluation of interactions with other mitigation options and effects of NETs on non-climate sustainable development goals; (ii) a better understanding of geo-physical constraints of negative emissions and implementation in IAMs; (iii) an analysis of NETs deployment dynamics in a risk management framework, acknowledging that many decisions in climate change mitigation will have to be made in the short term and therefore under uncertainty.

5. Outlook

The assessment conducted in this paper has shown that the state of the literature is at very different stages for each of the various NETs considered: there is a rapidly growing literature on BECCS, which is closely interlinked with the scenario literature on low-stabilization pathways. On the other hand, some NETs look back at a much longer history in terms of literature—even if carbon removal from the atmosphere has not historically been the main motivation. Examples of these are afforestation and reforestation, biochar and soil carbon storage. DACCS, ocean fertilization and terrestrial and marine enhanced weathering still have to find their way into the scenario literature, though this is starting to happen for some of the options. Beyond that, more ideas are emerging to withdraw CO2 and also other GHGs from the atmosphere, as has been briefly discussed.

Our review highlights some more general confusion around the role of negative emissions in climate change mitigation: while 1.5◦C scenarios strongly depend on NETs, 2◦C scenarios may rely on only limited or zero deployment of NETs. This result is in contrast to some of the claims that have been made in the literature (Williamson 2016, Gasser et al 2015, Parson 2017). Yet, right-sizing negative emissions towards what seems possible today (Field and Mach 2017) would require rapid and sustained emission reductions in the short-term. The window of opportunity for limiting NETs dependence is closing rapidly due the cumulative warming effect of CO2 in the atmosphere and the lock-in of large-scale carbon-intensive infrastructure. An emission trajectory as suggested by the current nationally determined contributions (NDCs) would already lock remaining 2◦C pathways deeply into NETs dependence—similar to the NETs dependence for 1.5 ◦C pathways today (Riahi et al 2015).

From a risk management perspective, the uncertainties and risks around large-scale NETs deployment suggest a need for swiftly ratcheting up emissions reductions over the next decade in order to limit our dependence on NETs for keeping temperature rise below 2 ◦C. Based on our assessment, large-scale deployment of NETs, as implied by some of the current literature on 1.5 ◦C scenarios, appears unrealistic given the biophysical and economic limits that are suggested by the available, yet still patchy, science today. The same concerns of realism apply equally to 2◦C scenarios that delay action until 2030. The direct policy implications of this NETs review are thus that, given the assessed uncertainties, strategies should aim at limiting warming to below 2◦C with the least possible assumed dependence on NETs. Simultaneously, NETs should be further researched, but until they are demonstrably available at the global scale there should be no delay in a global peak and decline of CO2 emissions. Whether global temperature can be limited to 1.5◦C as part of the Paris Agreements long-term temperature goal will depend on the pace of technological learning and would require positive surprises compared to the current state of knowledge. If NETs become available at scale over the course of the next 50 years, they will still play a fundamental role in the context of 1.5◦C by enabling to revert global mean temperature rise from possibly higher peak levels.

### 2NC --- No war

#### Stats prove.

Daniel Drezner **’**14, IR prof at Tufts, The System Worked: Global Economic Governance during the Great Recession, World Politics, Volume 66. Number 1, January 2014, pp. 123-164

The final significant outcome addresses a dog that hasn't barked: the effect of the Great Recession on cross-border conflict and violence. During the initial stages of the crisis, multiple analysts asserted that the financial crisis would lead states to increase their use of force as a tool for staying in power.42 They voiced genuine concern that the global economic downturn would lead to an increase in conflict—whether through greater internal repression, diversionary wars, arms races, or a ratcheting up of great power conflict. Violence in the Middle East, border disputes in the South China Sea, and even the disruptions of the Occupy movement fueled impressions of a surge in global public disorder. The aggregate data suggest otherwise, however. The Institute for Economics and Peace has concluded that "the average level of peacefulness in 2012 is approximately the same as it was in 2007."43 Interstate violence in particular has declined since the start of the financial crisis, as have military expenditures in most sampled countries. Other studies confirm that the Great Recession has not triggered any increase in violent conflict, as Lotta Themner and Peter Wallensteen conclude: "[T]he pattern is one of relative stability when we consider the trend for the past five years."44 The secular decline in violence that started with the end of the Cold War has not been reversed. Rogers Brubaker observes that "the crisis has not to date generated the surge in protectionist nationalism or ethnic exclusion that might have been expected."43

## A2

### 2NC --- crime

#### Crime coop now.

Celina B. Realuyo 20, Professor of Practice at the William J. Perry Center for Hemispheric Defense Studies at the National Defense University, Adjunct Professor at the George Washington University and a Senior Fellow at the Joint Special Operations University, 6/19/20, “Transnational Organised Crime and Illicit Financial Flows in Latin America,” https://www.gcsp.ch/global-insights/transnational-organised-crime-and-illicit-financial-flows-latin-america

How do governments/organisations respond to transnational organised crime? Do policies/protocols exist?

At the national level, Latin American governments have identified organised crime as a top threat and priority. Their strategies have included the security, economy and educational aspects of countering crime. Police forces are charged with the primary mission of countering organised crime. In several countries, governments have adopted an aggressive “mano dura” (firm hand) approach that has led to armed conflict and increased violence. In other instances, when governments have negotiated or brokered a truce with criminal groups, these groups have capitalised on this accommodation policy to further empower themselves. Unfortunately, criminal groups often are better equipped and trained than the security forces charged with countering them. In the case of some countries, like Colombia and Mexico, the military has been deployed to support the police in confronting the cartels and other armed groups, with mixed results. One of the greatest threats to government strategies to combat organised crime has been corruption within their police forces, many of whose members have been co-opted by the cartels and gangs. To mitigate the recruitment of new members by criminal groups and gangs, Latin American countries have focused on promoting socio-economic developments to create jobs in the licit economy and invested in educational programming for youth at risk of being drawn into gang or cartel activities. Latin American countries receive significant foreign assistance from the United States and Europe to improve their security systems, economies, judiciaries and anti-corruption measures.

#### It's resilient and regional.

James Blake 20, journalist and analyst and advisor, worked at the intersection of international security, humanitarian crises and refugee and migration issues, which includes advising world leaders, international businesses and large NGOs; and Colin P. Clarke, Senior Research Fellow at The Soufan Center, assistant teaching professor in the Institute for Politics and Strategy (IPS) at Carnegie Mellon University, 3/27/20, “Latin America: Local, Not Central, is Key to Reducing Crime and Violence,” https://www.justsecurity.org/69174/latin-america-local-not-central-is-key-to-reducing-crime-and-violence/

All across Latin America, leaders are targeting the reduction of organized crime as a key objective for their terms in power. But how important are state-level policies versus what’s being done at the local level?

National leaders are the ones getting and taking credit in the headlines. At just 38-years-old, El Salvador’s president, Nayib Bukele, is Latin America’s youngest political leader. His popularity has received a boost from the reduction in the country’s crime rate, which reached a historic low in January, the lowest level since the end of the country’s 12-year civil war in 1992. In Mexico, Andres Manuel Lopez Obrador won his election by promising to implement a new strategy of “hugs not drugs,” to combat growing crime and violence in the country. In Brazil, President Jair Bolsanoro claims to have successfully combatted crime, but scrutinizing the data there reveals a far more nuanced picture.

Despite national governments’ attempts to take the credit for declining crime rates, recent field research and analysis in Central and Latin America points toward an important policy approach in combatting organized criminal groups: To reduce crime, it is critical to boost local government’s resources in high-risk crime areas. Crime in these countries is very context-specific and requires nuanced and flexible policies able to more adequately address the roots of the issue, whether this is a lack of social and economic development or a reduction in murders because one cartel has asserted hegemony in its area of operations.

The research took place during several different trips to Central America, which included time in Mexico and El-Salvador conducting informal interviews with a number of security experts, members of civil society, journalists and informed analysts about the region. This research was supplemented by our local media and open-source research.

One important caveat is that in each of the three countries, there are areas where police and government officials do not go, and therefore there is no data on what is happening there, which obscures the use of official government statistics.

El Salvador

Bukele, the country’s popular president, has helped boost his approval ratings by linking his policies to a sharp drop in the homicide levels, a precipitous decline of 60 percent in his first seven months in office from July 2019. This, the president claims, represents the equivalent of saving a thousand lives.

The president points to his much-vaunted Territorial Control Plan (Plan Control Territorial), as the driver behind these changes. This plan includes the use of highly trained troops, (Metropolitan Agents Corps), along with the use of helicopters and drones. The Metropolitan Agents Corps are notorious for the balaclavas that cover their faces, which is a way to ensure that the gangs are unable to recognize them and enact subsequent retribution.

There is little doubt that the country’s drop in murders is impressive. However, sources consulted during fieldwork in San Salvador point toward a more nuanced perspective. One senior contact at a local university, speaking on the condition of anonymity because of the security environment, highlighted that while homicides have gone down, the number of disappearances, as well as the overall dollar amount obtained through extortion, remains high, indicating that criminal groups remain active. Replicating other gangs across the region, they have reduced the number of murders to avoid confrontations with the security forces.

Meanwhile, rumors have spread throughout El Salvador that the government has agreed to pay off the region’s two main criminal gangs, MS-13 and Barrio-18, to further bring down the homicide rates. For instance, Jeanette Aguilar, a long-term observer of El Salvadorian criminal gangs, told InSight Crime that the decline in murder rates was likely related to a withdrawal of both security forces and gangs in contested areas and that some of her police sources have pointed toward an “agreement between security forces and gangs.”

The reality based on multiple interviews in the country with a range of experts, journalists, former government officials is that there has been little evidence to suggest a successful reduction in the capabilities of the country’s two largest criminal groups: MS 13 and Barro 18. Local businesses in areas controlled by gangs continue to pay exorbitant extortion payments or face retribution. And for those born into gang-controlled areas, there is little opportunity outside of joining the gangs. Indeed, the overwhelming presence of gangs in parts of San Salvador, the country’s capital, has meant that, in these locations, members and sympathizers of criminal gangs, particularly from MS-13, have also taken up positions in services such as teachers, where they can support the gangs’ interests

Discussions with large humanitarian organizations that have operated in San Salvador for several years suggest that there remain large areas that are controlled by criminal gangs and where the government has no access. These areas rely on NGOs to provide services such as healthcare and education. There are also challenges to mobility in this city, because moving between locations that are controlled by different criminal gangs remains risky.

Analysts point to the similarities between the homicide rates of today and when the government admitted to agreeing a truce the gangs in 2012. It is clear that rather than a reduction in the strength of the cartels, there has instead been a shift in tactics, which are increasingly focused on the extortion of businesses versus murder.

Indeed, while it is still too early to reach a definitive conclusion, there are hopes that local initiatives that help make families self-sufficient and encourage their empowerment and access to opportunities, which in turn will reduce crime rates in areas where people perceive their only options to be with the gangs.

Mexico

President Lopez won office based on what he described as a transformational approach to politics across Mexico, including efforts to counter organized crime. His “hugs not bullets” strategy was focused on addressing the root causes behind individuals turning to criminal gangs, along with a structural change to the country’s penal system, which included a proposal to provide amnesty to some cartels, however, it appears he has now walked back on this pledge. The success of his strategy will take time to evaluate but because of the power of a number of cartels and criminal gangs across the country, a reduction in the violence is unlikely to occur simply through the adoption of his tactics alone.

In 2019, the country’s murder rate reached its highest level ever, at approximately 95 murders per day. Murders in Mexico are largely based on inter-cartel violence. For instance, in Tijuana, which is among the most dangerous cities in the world, cartels battle for control of drug distribution nodes and trafficking routes across the country.

One of the primary drivers of homicides over the past year was the battle between cartels for control of the trafficking routes for fentanyl. Earlier this year, Ismael Camberos Hernandez, secretary of public security in the state of Zacatecas, told a local newspaper that as much as 90 percent of the deaths in the state, which were triggered by the arrival of Sinaloa Cartel, could be linked to control of the fentanyl route, which connects the Pacific coast with the United States.

Whenever organized crime rates change, cartel control is often one of the key issues at play. Vanda Felbab-Brown of Brookings Institution coined the phrase “narco-peace,” to capture the idea of what happens when one cartel establishes hegemony and is not challenged by other cartels in the area which results in murder rates declining.

Beyond the hegemonic power of cartel, a more nuanced local effort is also important when designing policies to combat criminality. When there has been an improvement in reducing crime, it is often connected to efforts by the local government, including enterprising mayors and other local politicians, to concentrate on building social programs and tackling economic shortcomings such as unemployment.

For instance, Mexico City has over the years faced a significant increase in criminal activity. But those crimes are most often occurring in specific neighborhoods. According to a study by Carlos Vilalta and Robert Muggah on violence in Mexico City, just 10 municipalities in the city are responsible account for over one quarter of crimes. Their research points to two likely theories in these higher crime locations: “social disorganization” and deteriorated social and government institutions. And local efforts to improve the underlying root causes can result in a decrease in crime.

Brazil

Brazil has long struggled to control gang and criminal violence in the country, with its infamous favelas and shantytowns veritable no-go zones for police and law enforcement. Gangs control territory, mediate disputes, and provide an alternative form of governance in areas outside the writ of state control. Some gang members continue to run their criminal enterprises from prison, operating with impunity.

Brazil’s murder rate declined by 13 percent between 2017 and 2018. The country’s populist President Jair Bolsonaro, who came to power claiming that he would let criminals “die in the street like cockroaches” and has been quick to take credit for the drop in murders, praised his security forces while highlighting the increase in drug seizures and keeping senior criminal figures in high-security prisons. The deployment of more military troops and security forces has contributed, in part, but this effect could be fleeting once forces are redeployed elsewhere.

Yet, there are several other factors that have contributed to the reduction in crime and are, in fact, more directly responsible for any success, however ephemeral that may be.

This includes the collapse of a truce in 2016 between two gangs, First Capital Command (PCC) and the Red Command, which led to a surge in gang violence. By 2018, the PCC had consolidated control over trafficking routes and hubs, contributing to the decrease in violence.

Under the tenure of former President Michael Temer, the Ministry of Public Security unveiled a deliberate strategy to share intelligence between federal and state authorities and were complemented by a renewed focus for central governments to take back control of prisons from criminals and gang leaders.

State governments have been refining their approach to countering organized crime, moving to focus more on intelligence-led and data-driven strategies that have begun to bear fruit. Through trial and error, the states have experimented with a range of crime prevention measures.

Another issue which might become increasingly important is the use by the mayor of Sao Paulo of cutting-edge technology, which includes military drones that were pioneered in Israel, along with facial recognition and crime prediction methodologies, which use artificial intelligence (AI).

Conclusion:

Our research highlights several initial important themes for improving efforts to combat organized criminal groups in Latin America.

National level policies, while attracting significant media attention and helping to boost national leaders’ popularity, are often not the most important component of strategies to combat organized criminal gangs.

Instead local governments, including cities, should be empowered to act in ways which are specific to their context and follow strategies that work based on the threat specific threat being faced.

### 2NC --- No LA War

#### No war---laundry list.

Fedirka ’16 [Allison; February 15; senior analyst for Geopolitical Futures, previously worked at Stratfor the Latin America regional director, international relations master's degree from the University of Belgrano; Geopolitical Futures, “How South America Has Avoided Interstate War,” <https://geopoliticalfutures.com/how-south-america-has-avoided-interstate-war/>]

The 80-year absence of interstate warfare in South America is noteworthy. From the standpoint of modern geopolitics, this is a truly a rare event. Geography discourages most of these countries from forming strong interdependent relationships and also makes it difficult to use key elements of modern warfare. Significant technological advancements in infrastructure, transportation and military hardware would be necessary to overcome these geographic challenges. Given our current model of the Western Hemisphere, this absence of interstate warfare in the region can be expected to continue for the foreseeable future. As a result, domestic issues – drug trafficking, guerrilla groups, disease, natural disasters, etc. – will remain by far the largest security threats to South American nations.

#### no latin american escalation

Cárdenas 11 [Mauricio, director of the Latin America Initiative and senior fellow and at the Brookings Institution, 3/17/11, foreign policy, “Think Again Latin America,” Foreign Policy, http://foreignpolicy.com/2011/03/17/think-again-latin-america/]

"Latin America is violent and dangerous." Yes, but not unstable. Latin American countries have among the world's highest rates of crime, murder, and kidnapping. Pockets of abnormal levels of violence have emerged in countries such as Colombia -- and more recently, in Mexico, Central America, and some large cities such as Caracas. With 140,000 homicides in 2010, it is understandable how Latin America got this reputation. Each of the countries in Central America's "Northern Triangle" (Guatemala, Honduras, and El Salvador) had more murders in 2010 than the entire European Union combined. Violence in Latin America is strongly related to poverty and inequality. When combined with the insatiable international appetite for the illegal drugs produced in the region, it's a noxious brew. As strongly argued by a number of prominent regional leaders -- including Brazil's former president, Fernando H. Cardoso, and Colombia's former president, Cesar Gaviria -- a strategy based on demand reduction, rather than supply, is the only way to reduce crime in Latin America. Although some fear the Mexican drug violence could spill over into the southern United States, Latin America poses little to no threat to international peace or stability. The major global security concerns today are the proliferation of nuclear weapons and terrorism. No country in the region is in possession of nuclear weapons -- nor has expressed an interest in having them. Latin American countries, on the whole, do not have much history of engaging in cross-border wars. Despite the recent tensions on the Venezuela-Colombia border, it should be pointed out that Venezuela has never taken part in an international armed conflict. Ethnic and religious conflicts are very uncommon in Latin America. Although the region has not been immune to radical jihadist attacks -- the 1994 attack on a Jewish Community Center in Buenos Aires, for instance -- they have been rare. Terrorist attacks on the civilian population have been limited to a large extent to the FARC organization in Colombia, a tactic which contributed in large part to the organization's loss of popular support.

# 1NR

## 1NR --- Midterms

### 2NC --- O/V --- Filibuster

#### Extinction

Copley 17—(Dean of the College of Fellows of the International Strategic Studies Association, member of the Order of Australia for contributions in the field of strategic analysis). Gregory R. Copley. Aug 19, 2017. “What Would A U.S. Civil War Look Like?”. OilPrice. <https://oilprice.com/Geopolitics/North-America/What-Would-A-US-Civil-War-Will-Look-Like.html>. Accessed 7/13/21.

And the next US civil war, though it yet may be arrested to a degree by the formal hand of centralized government, will destabilize many other nation-states, including the People’s Republic of China (PRC). It may, in other words, be short-lived simply because the uprising will probably not be based upon the decisions of constituent states (which, in the US Civil War, created a break-away confederacy), acting within their own perception of a legal process. It is more probable that the 21st Century event would contage as a gradual breakdown of law and order. The outcome, to a degree dependent on how rapidly order is restored, would likely be the end, or constraint, of the present view of democracy in the US. It would see a massive dislocation of the economy and currency. It would, then, become a global-level issue. Humans mock what they see as an impulse toward species ~~suicide~~ [death] among the beautiful lemming clan of Lemmus lemmus.1 In fact, these tiny creatures have a societal survival pattern which seems more consistent than that of their human detractors. The pattern of human history shows that civilizations usually end through internal ~~illness~~ [problems] rather than at the hand of external powers.

#### Were on the brink AND it goes nuclear

Jamie Seidel 19. Staff writer at the News Corp Australia Network; citing Dr. Victor Hanson, historian at the Hoover Institution; Professor Morris Fiorina, political scientist at the Hoover Institution; Professor Peter Turchin, Professor at the University of Connecticut; Dr. Seth Jones, researcher at CSIS. 01-06-19. “The Second US Civil War.” https://www.news.com.au/lifestyle/real-life/news-life/the-second-us-civil-war/news-story/ec43b36de5f5f9f11e478a8fc71ea2dc

“(The US stands) at the brink of a veritable civil war”. THE FOREVER WAR The first US Civil War began in April 1861. The cultural divide behind this clash never went away. It was a fight over slavery. But it was also a fight over religious and political divides. It’s a fight still being fought out in social media, in rallies and in political conventions. Here’s one example, from many. Former US marine and now talk-show host Jesse Kelley has stated: “It’s time for the United States to divorce before things get dangerous”. “There is simply no common ground with the Left anymore,” he writes. “We are now the couple screaming at each other all night, every night as the kids hide in their room … “It does not have to be this way. There is a difficult, but ultimately peaceful path that ends with everyone getting most of what they want. We divide the nation in two.” It’s a view getting some serious attention: Governors, Senators, Representatives, Preachers ... all are making similar calls. South Carolina members of parliament have proposed a bill giving that state the power to secede. But isn’t it all just a storm in a teacup? Political wannabes playing to their individual ‘teams’? Vocal minorities drowning out the silent masses? Dr Hanson again has his fears: “zealous and sometimes warring tiny minorities can escalate tensions, nullify opposition, and bully the silenced majority to sanction — or at least not object to — violence.” But Dr Hanson’s Hoover Institution colleague, political scientist Professor Morris Fiorina, is not so worried. “I am happy to report that the available data provide grounds for feeling much more sanguine about the state of our country,” Professor Fiorina writes. “Although they are noisy and harmful to our politics, the kinds of people Hanson criticises are many fewer in number than generally believed. They are what political scientists call the political class, a small minority of self-appointed activists, demonstrators, donors, partisan media commentators and office-seekers. Given that such people are the public face of politics, many Americans understandably take them as representative, but they are statistically abnormal — what we call “outliers.” But such anger-fuelled rhetoric is not unique to the United States. Extremism is also on **the rise** in Europe, the United Kingdom — and Australia. What makes the US different is the terrifying amount of weaponry in the hands of its citizens ANGRY PEOPLE The social cauldron is continuously being stirred. Facts are manipulated. Those holding differences of opinion are labelled ‘mortal enemies’. It’s an environment inflaming threats and fear. Politicians seeking to grab attention through quick one-liners are no help. California Democrat Eric Swalwell responded to threats of civil war over his hopes to run for the 2020 presidency on a gun-control platform. He said it would be a “short war” because “the government has nukes”. The idea of using nuclear weapons against one’s own citizens, needless to say, did not go down well. President Donald Trump has also made his mark: he made a seemingly half-serious quip about becoming “president for life”. “(Xi Jinping was able to do that. I think it’s great. Maybe we’ll give that a shot some day”. In the context of his daily social media outbursts, this now seems all too feasible to many.

#### Turns the aff --- It’s all reliant on US cred --- Hyperpolarization destroys foreign policy

Myrick 21—(Assistant Research Professor of Political Science at Duke University). Rachel Myrick. June 14, 2021. “America Is Back—but for How Long?”. Foreign Affairs. <https://www.foreignaffairs.com/articles/world/2021-06-14/america-back-how-long>. Accessed 6/15/21.

There are few scenarios in which hyperpolarization will not harm U.S. foreign policy. At the very least, polarization will introduce uncertainty in foreign affairs and exasperate U.S. allies. And if continued polarization leads the United States to **abandon tricky negotiations or renege on existing commitments** every time a new party is in power, Washington’s reputation as a credible adversary and a reliable ally could be in serious jeopardy.

### 2NC --- UQ

#### Latest study shows GOP landslide --- Lack of econ policies nuke them

Greenwood, 3/29 (Max Greenwood, 3-29-2022, accessed on 3-31-2022, The Hill, "Poll finds GOP favored to win House; has 6-point lead over Democrats", <https://thehill.com/homenews/campaign/600167-poll-gop-holds-6-point-lead-over-democrats-on-generic-congressional-ballot/)//Babcii>

Republicans are **favored to win** back control of Congress in this year’s midterm elections, according to a new Harvard CAPS-Harris poll released **exclusively to The Hill** on Monday. In the **generic ballot test** — which asks voters whether they would rather elect a Republican or Democrat to Congress — the GOP leads the Democratic party by a **53 percent** to 47 percent margin. Among independents, **Republicans gained an even more significant advantage**. Fifty-nine percent of those respondents said they would choose the GOP candidate, while just 41 percent said they are more inclined to vote Democratic in November. The poll is the latest sign that Democrats are facing an uphill battle ahead of the 2022 general elections, when Republicans will have a chance to win back the House majority that they lost in 2018. The results aren’t entirely surprising. Historically, the **party in power tends to lose** ground in midterm elections, and President [Biden](https://thehill.com/people/joe-biden/)’s approval ratings are well **underwater**. The Harvard CAPS-Harris poll found that only 39 percent approve of [Biden](https://thehill.com/people/joe-biden/)’s performance in the Oval Office, while 55 percent disapprove. Republicans are already feeling optimistic about their electoral prospects in November. During their annual retreat last week, House Republicans were briefed on an internal survey from the National Republican Congressional Committee (NRCC) that showed the GOP with a 4-point lead over Democrats on the generic ballot. During that retreat, House Republicans also sought to outline their strategy for the 2022 midterms — a strategy that focuses intensely on issues like **inflation** and the cost of living. That message may ultimately pay off, according to the Harvard CAPS-Harris poll. Roughly one-third of respondents — 32 percent — in the poll said that inflation is the most important issue facing the country ahead of the 2022 midterms. In second place at 27 percent was the economy and jobs. Bolstering the GOP’s numbers is the belief among most voters that the country — and even more so the economy — is on the wrong track, said [Mark Penn](https://thehill.com/people/mark-penn/), the co-director of the Harvard CAPS-Harris poll. Only 34 percent of respondents said they believe the country is on the right track, according to the poll, while 58 percent said that things are heading in the wrong direction. Similarly, only 32 percent said the economy is on the right track compared to 60 percent who believe it’s on the wrong track. “This is a **significant lead for the Republicans** and shows building strength among key independent and suburban voters,” Penn said. “Typically, the shift is even greater in the swing districts, especially given the wrong track in the economy.” The Harvard CAPS-Harris Poll survey of 1,990 registered voters was conducted from March 23-24. It is a collaboration of the Center for American Political Studies at Harvard University and the Harris Poll.

#### Generic ballot, turnout, and popularity show overwhelmingly republican

Rothenberg, 3/29 (Stuart Rothenberg, Stuart Rothenberg is Senior Editor at Inside Elections. He holds a B.A. from Colby College and a Ph.D. in political science from the University of Connecticut. He has taught at Bucknell University and at the Catholic University of America., 3-29-2022, accessed on 3-31-2022, Roll Call, "New polls confirm Democratic problems for November - Roll Call", <https://rollcall.com/2022/03/29/new-polls-confirm-democratic-problems-for-november/)//Babcii>

**Generic Ballot**

The Pew Research survey showed registered voters split evenly on the “generic ballot,” with 43 percent planning to vote for the Democratic nominee for Congress in November and the same percentage planning to vote for the Republican nominee.

The NBC News survey found 46 percent of respondents preferring a Congress controlled by Republicans, while 44 percent favored a Democratic-controlled Congress.

Both surveys are good news for Republicans.

Historically, **the generic ballot test has underestimated the GOP vote**. Even more important, voters who decide late in a cycle — including those who are now “undecided” about their congressional vote later this year — tend to reflect the national mood, which currently shows an **unpopular president** and a public that believes the country is headed “off on the wrong track.”

The large number of Democratic retirements could also **give Republicans additional targets**, though that could be offset by a surprisingly good Democratic redistricting cycle.

Turnout, of course, **is always crucial**, and once again the news is not good for Democrats.

The Pew Research Center survey found Republicans are 10 points **more likely** than Democrats to say that partisan control of Congress “really matters.” That difference in intensity is likely to translate into a **significant turnout advantage** for the GOP.

### 2NC --- AT --- Too Soon

#### Messaging IS the deciding factor – republicans are ahead but it’s still losable but it means now is key

Jeffers 3-28 Gromer Jeffers - Political reporter at The Dallas Morning News, 3-28-22, "Democrats, Republicans crafting messages for November’s crucial midterm elections," Dallas News, https://www.dallasnews.com/news/politics/2022/03/28/democrats-republicans-crafting-messages-for-novembers-crucial-midterm-elections/)//bp

As the coronavirus pandemic eases and Americans anxiously watch the war in Ukraine, Democrats and Republicans are honing their pitches to voters in this year’s critical midterm elections. The outcome of elections hinges on message, momentum and money. Both parties, particularly their incumbents, will have the resources needed to compete in the general election. So the money factor will likely be a wash. But Republicans have history on their side. The party that controls the White House routinely suffers catastrophic losses during midterm elections. With President Joe Biden struggling in the polls, Democrats are bracing for the prospect of losing the House, and perhaps the Senate. Since the money game is a push and momentum is currently on the side of the GOP, the message Democratic and Republican candidates deliver to voters could determine not only November’s general election, but which party has the driver’s seat going into the 2024 presidential contest. “We have to carry the message that we’re here to ensure safe communities,” said U.S. Rep. Michael Burgess, R-Pilot Point. “We want an economy that’s secure and prosperous. We’d like to see success for our kids in schools. Our government needs to be accountable to the people.” Democrats control the White House and both chambers of Congress. They acknowledged that they need to improve their messaging to voters to be successful in November. “We do need to talk about what we’ve done and the legislation that we have passed,” said Rep. Colin Allred, D-Dallas. “That legislation is so big, like the American Rescue Plan and the bipartisan infrastructure bill, that people sometimes forget what was in it. You have to actually go through and kind of tell people why this legislation is important.” Republicans this year need to pick up five seats to take control of the U.S. House. The GOP needs a net gain of one seat to take control of the Senate, as they currently hold 50 seats. Democrats have nominal control of the 50-50 chamber because Vice President Kamala Harris can cast tiebreaking votes. The outcome of midterm elections is typically predictable. The president in power is almost always humbled. In 2018, when Donald Trump was president, Democrats rallied voters angry that Republicans were trying to repeal the Affordable Care Act. They picked up 41 seats to seize control of the House. While Trump suffered a midterm meltdown in 2018, Barack Obama presided over defeats during the midterm elections during his presidency, including the 2010 contests in which Republicans picked up 63 seats to win the House. The last time the party in power held serve was in 2002, when President George W. Bush and Republicans managed to hold the House and win the Senate. Only four times in history (1902, 1934, 1998 and 2002) has the president in power picked up House seats in a midterm election. “The magnitude of the Republican victory this November could be so large, and it could carry over into 2024 for whoever is the Republican nominee for president,” Burgess said. But Republicans are at a slight risk of being tripped up in November by Trump, a bugaboo from 2020. Trump wants GOP candidates to acknowledge his grievances, notably the unfounded claim that the 2020 election was stolen from him. Earlier this month he rescinded his backing of Alabama Rep. Mo Brooks, a Senate candidate who said the former president can’t move past the 2020 elections.

#### Theoretical research proves—initial preferences are key

Dr. William Jennings 16, PhD, Senior Lecturer in Politics and International Relations at the University of Southampton, and Dr. Christopher Wlezien, Professor at University of Texas-Austin; American Journal of Political Science, “The Timeline of Elections: A Comparative Perspective”, January 2016, p. 231

Discussion and Conclusion Voter preferences evolve in a systematic way over the election timeline in a wide range of representative democracies. There is structure to preferences well in advance of elections, indeed, years before citizens actually vote. That is, very early polls predict the vote, at least to some extent. This largely reflects differences in the equilibrium support of parties and candidates. Polls do become increasingly informative over time, however, pointing to real evolution of preferences. That this pattern holds across countries is important and points towards 35 a general tendency in the formation of electoral preferences. But the pattern is not precisely the same in all countries. Political institutions structure the evolution of voters’ preferences.23 Government institutions are important. Preferences come into focus later in presidential elections than in parliamentary ones. A year out from Election Day, parliamentary elections are more predictable from the polls than are the outcomes of presidential races. This presumably reflects the greater uncertainties involved in the assessment of presidential candidates and also the time it takes for voters to directly factor in their dispositions toward the political parties (Erikson and Wlezien 2012). In parliamentary systems, by contrast, parties matter more early on. This is important because partisan dispositions, while not fixed, are more durable than those toward candidates. That preferences are in place much later in presidential systems thus comes as little surprise. That there is no real difference between legislative elections in presidential and parliamentary systems may surprise, however. It implies that parties do not matter consistently more to voters in the latter. Electoral institutions also are important. Preferences in legislative elections come into focus more quickly and completely in proportional systems. We find limited evidence of general differences across systems—that proportional representation per se is what matters. We find stronger evidence that the party-centricity of the systems matters most of all. Although closely related to proportionality, there is significant variation in party-centricity within both proportional and plurality systems, and this variation is of consequence for the formation of electoral preferences. The number of parties, meanwhile, appears to have little effect. We have only scratched the surface of the variation in context. To begin with, political institutions differ in ways that we have not considered. Perhaps more importantly, there are other differences in context that we have not even begun to explore. Some of the differences relate to countries themselves. For instance, following Converse (1969), there is reason to think that the age of democracy is important to the formation and evolution of preferences. Other differences relate not to political institutions or the countries themselves, but to characteristics of political parties. There are numerous possibilities here, most notable of which may be whether parties are in government or opposition, as is suggested by the literature on economic voting (e.g. Fiorina 1981; Duch and Stevenson 2008). Another is whether parties are catch-all or niche. The age and size of parties also could matter. Clearly, much research remains to be done, and our methodology can guide the way. That said, we have learned something about the general pattern relating preferences and the vote over the election timeline and the structuring influences of political institutions. We have shown that preferences are often in place far in advance of Election Day and that they evolve slowly over time. Indeed, the final outcome is fairly clear in the polls before the election campaign really begins. This is not to say that the campaign does not matter, as it does, particularly in 37 certain types of countries and elections where candidates are central. Even there, however, it is clear that the “long campaign” between elections matters most of all.

### 2nc – link - antitrust

#### Antitrust taps into massive anti corporate populism – squo efforts are insufficient – the plan saves democratic messaging

Hauser 22 (Jeff Hauser and Max Moran, 1-13-2022, "What Biden’s Message Should Be," Democracy Journal, <https://democracyjournal.org/arguments/what-bidens-message-should-be/>) //bp

Put simply, our analysis show that Biden is in desperate need of a villain, and what that should translate into is a corporate crackdown. Biden needs to take the fight to the elite villains who are screwing the American people. He needs to tell the public who the villains are, and he needs to fight them on the people’s behalf. And the best villains available today, on both policy and politics, are predatory megafirms whose abuses harm the public. As President, Biden has unique powers that could let him generate conflict on his terms—federal investigation, prosecution, regulation, and more. These policy tools are also powerful messaging opportunities. Here, then, is the challenge for Biden: He needs villains whom he can credibly identify to the public as his adversaries and then pursue under longstanding law. He, and frontline Democrats down-ballot, need to know and believe they will be well-liked for pursuing these villains. Corporate and ultrarich lawbreakers fill that need. What The People Want: Populism Our polling finds voters agree with the following statements: “Wealthy people and corporations are regularly not punished for breaking the law” and “The criminal justice system unfairly targets poor people over rich people,” by margins of +67 and +48 percentage points respectively. Majorities of Democrats, Independents, and Republicans all agreed with both sentiments. Voters supported providing more funding to federal agencies which investigate corporate lawbreaking by a margin of +49 percentage points, again with strong net support even from Republicans. These results square with other polling showing support for policies like higher taxes on the wealthy and forcing fossil fuel companies to pay for the costs of climate change adaptation. We are living in an era of populist rage against lawbreaking corporations and the ultra-wealthy. Working people of all races have been put down and beaten up by the powerful for decades, and they’re angry. This anger is not dissipating—by most popular accounts, it’s been festering since the 2008 financial crisis over a decade ago. The only remaining question is which political party can credibly claim to stand for the angry masses fighting back against oppressive elites. Democrats don’t like to hear this, but to many voters, this is a genuinely open question. We Democrats sometimes like to flatter ourselves by saying we’re “the party of labor” in America. But most of the party’s actions haven’t supported that claim for at least three decades—longer than most Millennials have been alive. Since the 1980s, Democrats and Republicans have both willingly enabled laissez-faire deregulation, corporate concentration, tax cuts for the wealthy, race-to-the-bottom trade pacts, and other hallmarks of our neoliberal age. There’s a reason many people feel that Democratic and Republican politicians are the same kind of people in different-colored ties: On far too many economic issues, they have been. This means that neither party is necessarily set up to capitalize on this populist fervor. However, only one party has been trying to in recent years—and it’s not the Democrats. Every high-profile Republican right now wants to attack the “elite.” Insurrectionist Senator Josh Hawley wrote a book railing against Big Tech, onetime establishment robot Senator Marco Rubio supported unionizing Amazon’s warehouse employees (although only to punish the firm’s alleged “wokeness”), and Ohio Senate candidate J.D. Vance has gone from hedge fund investor to decrying global trade pacts. Donald Trump attacked free trade agreements and wealthy “globalists” in 2016, and voters both considered him the most liberal Republican candidate in recent history, and preferred his message on the economy two months out from the election. These Republicans obviously do not believe in any of these populist stances they pretend to stand for. Hawley and Vance are both owned by right-wing tech billionaire Peter Thiel, and Rubio’s 2016 donors came from the tech and finance worlds as well. He has not been up for re-election since. Though they rage against “Big Tech”—because social media sites sometimes take down open bigotry, not because of actual market abuses—these conservatives’ use of phrases like “woke elite” is telling: They are usually pointing to Democrats’ provision of new rights to people of color, women, LGBTQ people, and other disempowered groups as the cause of society’s problems. Of course, “society” here is just the bigoted individuals and the wealthy tax scofflaws who actually puppeteer their party. Unfortunately, phony populism still trumps no populism at all. Any politician invoking populism with any success then gets to define who is and isn’t part of “the people,” and describe what does and doesn’t make the elite “elite.” To trump Republicans at their own game, Democrats can instead name the actual elite as their villains: CEOs, wealthy heirs, and everyone else at the top of the socioeconomic ladder who’ve pulled it up behind them. But doing so will require some hard looks in the mirror. It’s (Still) The Economy, Stupid Many Democratic party leaders would prefer to continue castigating Republican authoritarianism instead of invoking class politics. But it’s important for ultra-wealthy malefactors to be the villains Democrats focus on. Look at Terry McAuliffe, the former Governor of Virginia whose loss spurred this latest round of Democratic navel-gazing. McAuliffe tried to paint his Republican opponent, Glenn Youngkin, as Donald Trump in sheep’s clothing, and the result was laughable. When Stryker, the Third Way pollster, asked Biden-to-Youngkin voters about this message, “they said, ‘Oh, these silly ads that compared Youngkin to Trump—he just doesn’t seem like that guy.’” Youngkin didn’t have Trump’s unhinged demeanor, so the comparison had no legs. This isn’t just a Virginia issue. Pollsters and electoral experts across the board agree that lambasting GOP extremism just isn’t an engaging strategy for swing voters or non-engaged citizens. “The first thing is, it’s always hard for people to imagine the worst. But the second is, in people’s daily lives they have more pressing things that they’re focused on,” Democratic pollster Pete Brodnitz told The New Republic’s Daniel Strauss. “I’ve done work in places where democracy really has been at risk, and I’ve worked in places where there have been coups and then where there has been a discussion about restoring democracy.… Even in places like that, you’re going to have a strong sense that economic issues are paramount.” And they were indeed paramount in Virginia in 2021. “The No. 1 issue for women right now is the economy, and the No. 1 issue for Black voters is the economy, and the No. 1 issue for Latino voters is the economy,” as Stryker put it. (Youngkin peeled off both Biden voters of color and white Biden voters.) A strong economic message was available to Democrats in that race: Youngkin was the co-CEO of the Carlyle Group, a massive private equity firm with a long history of firing unionized workers. Support for organized labor is at record highs. And private equity’s abuses are even more ubiquitous in 2021 than they were when Obama defeated Romney on the back of the “Bain issue” in 2012, despite a sluggish at best economic “recovery.” So why didn’t McAuliffe barrage Youngkin for the very real harms his firm inflicted on working people? Because McAuliffe himself is a onetime Carlyle Group investor. When McAuliffe tried such attacks in July, the media naturally called out the hypocrisy. Connections like these don’t just close off lines of attack in political messaging, they actively undermine faith in politics altogether, reinforcing the notion that Democrats and Republicans are no different. This harms Democrats more than Republicans; Democrats depend on high voter turnout to win elections, and nothing kills turnout like disillusionment. In the end, Youngkin ended up being the only one offering any sort of culprit for voters’ grievances: In his, case school administrators. This took the form of an absurd and racist attack on an imagined version of “critical race theory,” and Democrats must condemn this bigotry, but they should also recognize that it became an effective vehicle for real anger at the educational system, which has parents saw as abandoning them during COVID-19. McAuliffe couldn’t credibly attack the private equity class that he is a part of, he could only offer warmed-over broadsides against a former President who left office a year ago. Make Enemies, and Be Proud of It The good news is that through many of his Administration’s efforts, Biden is already attacking the predatory ultra-wealthy and scofflaw corporations. The bad news is that Biden seems determined not to tell the public, which he must do if he is to seize upon their righteous anger. Through executive orders and appointees such as Lina Khan at the Federal Trade Commission, Biden’s Administration has overseen a sea change in domestic economic policy. The White House is going up against the toughest economic bullies in the country for the sake of consumers, workers, and mom-and-pop shops. But you wouldn’t know that if you listened to the White House’s go-to economic messengers, like National Economic Council Director Brian Deese. On a recent webinar with the anti-monopolist think tank American Economic Liberties Project, Deese, who was there to discuss the Administration’s new antitrust policies, sounded more like a venture capital comms department than anything else. “The more innovators and disruptors we have entering markets, the more those companies can compete toe-to-toe, the more benefit to our whole economy,” Deese said. Not once in his 10 minutes of remarks did he use the word “monopoly”—to an audience of anti-monopolists! Deese has been a go-to economic policy messenger for the Obama and Biden White Houses, so he knows how to stick to his talking points. We can safely assume his messaging reflects the Administration’s overall strategy: avoiding an emphasis on conflict, speaking instead of unity and making government work for all. This is an enormous mistake. Biden’s personal hero Franklin Delano Roosevelt understood better than anyone that it is good for a politician to have enemies, because it is through those enemies that a politician shows what their principles really are. President Roosevelt once famously said, of the forces of “organized money” like monopolists and financiers, “They are unanimous in their hate for me—and I welcome their hatred.” People trusted Roosevelt to fight “organized money” because he made no effort to win it over. By contrast, people don’t know who Biden is willing to alienate for the sake of his principles, and therefore they don’t know what his principles really are. Biden has tried to be all things to all people, which makes few of his promises appear trustworthy. Keep Up the Drumbeat Biden’s milquetoast messaging also lacks any narrative propulsion. If the White House does not provide political reporters with conflict, reporters will naturally look for conflict elsewhere. For example, zeroing in, as they have, on Joe Manchin and Kyrsten Sinema as they (particularly the former) continue to hold the President’s legislative agenda hostage to their corporatist whims. Now think back to the early days of the Biden Administration. Back then, Biden himself drove coverage as the President guiding Americans against a truly shared enemy: COVID-19. He was getting jabs in arms and masks on faces, and he seemed unafraid of any blowback from reactionaries. In March, Biden was polling at 59 percent approval, far above his 43 percent approval rating today. The lesson should be clear: People like to see their President fighting for them, and the media want to cover such fights. When the deadly virus is no longer Biden’s go-to villain, abusive mega-corporations and the ultra-wealthy will still be around. The post-New Deal executive branch was built for cracking down on economic abuses of power—abuses that include pharmaceutical companies hoarding vaccine know-how developed through government funding. Crackdowns on elite lawbreaking make for highly compelling stories. Figures like Elizabeth Holmes of the now defunct and debunked Theranos blood-testing company, the parents behind the Varsity Blues college admissions scandal, and WeWork’s former CEO Adam Neumann, who botched the company’s IPO while then appearing to profit from the company’s loss, have all become instant cultural touchstones. Many articles, analyses, Saturday Night Live sketches, docu-dramas, and more have been created about each of them, ensuring voters of every level of political engagement have some sense of who these people are, and what makes them odious. In 2021, the most compelling villains in fiction were also greedy oligarchs, from the cabal of plutocrats on Squid Game to the Harkonnen space nobles in Dune, to the pompous Roy family on Succession. Think of how compelling a narrative—and how good for public policy!—it would be for the President to be the hero fighting similar antagonists in real life. Forget The “Rising Tide” To be fair, there is a logic behind the Administration’s current messaging. Watch enough White House TV hits, and you’ll notice that Biden’s messengers follow the old nostrum that “a rising tide lifts all boats.” They often talk about raising wages and restoring dignity to workers, but never investigating megafirms or passing new regulations. They affirm folks at the bottom, but they never challenge folks at the top—not even the firms and executives suppressing wages and stripping dignity from workers. It is a rhetoric of raising floors, but never of lowering ceilings. What has this strategy gotten Biden? Despite rising wages and massive job growth—legitimately major achievements, for which the public credits the President—enormous majorities say the economy is getting worse. That’s not our polling, that’s polling from the solidly independent firm Navigator. Moreover, if Biden wants to address inflation, the most salient kitchen-table economic issue of our time—well, persuadable voters already see corporate greed as the main driver of it, according to Navigator. And they’re right: The same firms jacking up prices are seeing their largest profits since 1950 and splurging on a new private jet boom while they’re at it. It turns out that improving conditions at the bottom and tackling abuses at the top are not so easily separable. Biden’s rhetoric should instead be about fighting against big corporate malefactors on behalf of the average American. Our own polling indicates enormous support for the public policy departments Biden can use to make enemies of corporate America, and strong support for a President willing to wield them. The Department of Labor polled with a net favorability of +28 percent. The Occupational Safety and Hazard Administration enjoys +42 percent support. Even Republicans like these agencies. Meanwhile, voters of all stripes hate Wall Street bankers (-36 percent net favorability) and pharmaceutical companies (-16 percent net favorability). Increasing funding for federal agencies that investigate corporations that break the law has +49 percent net support, including +42 percent support among Independents and +27 percent among Republicans. These agencies are at the President’s beck and call. He needs only to command them to redouble their investigations into powerful corporate actors—and then, indispensably, to tell the public he is doing so for its benefit. Deliver Results In addition to polling strongly, a populist, anti-corporate agenda is also eminently achievable without Congress. And this is where the other half of our research comes in. Without passing any new legislation, Biden can do the following: crack down on the cottage industry of union-busting legal consultants employed by many of the most abusive firms; prosecute Mark Zuckerberg and Facebook for rampant fraud; indict ex-Boeing CEO Dennis Muilenberg for the hundreds of deaths in the 737 MAX tragedy that occurred on his watch; prosecute big banks for decades-worth of flagrant lawbreaking (an extremely popular prospect); and more. We’re living through a “Golden Age of White-Collar Crime.” Enforcing existing white-collar criminal law does not fall to the Senators from West Virginia and Arizona; it falls to the Attorney General. The Biden Administration has already identified white-collar crime as a serious problem and signaled to the white-collar criminal defense bar that changes are afoot at the Department of Justice. Reportedly, they have private defense attorneys quaking in their white shoes. But that (excellent) message to the bar hasn’t broken through to voters at large. The anger in our populist political moment increased when no one was prosecuted for the financial crisis. The best way for a politician to harness that populist energy, then, is to finally start bringing some corrupt executives to court. Unfortunately, even close observers haven’t seen the Department walk the talk yet. When the Justice Department announces which CEOs it’s arresting, when their actual trials begin, only then the public will know they can trust this Biden promise. Economic Populism Trumps The Culture Wars Republicans have spent the last year scaremongering about an imagined version of “critical race theory,” which in reality is a narrow school of legal analysis studied only at the university level, but has now become tied to…whatever Fox News feels like stirring the pot about from hour to hour. Yet centrist Democrats have panicked whenever Republicans accuse them of heresies against conservative mono-culture, from communism to being too “woke” (a term so overused it’s been stripped of its original meaning) to liking Beyoncé. These accusations always smell of bigotry, are almost never proven or provable, yet are an ever-present part of our politics. We implore President Biden and our fellow Democrats to recognize that there is absolutely nothing they can do to prevent a Republican from calling them whatever dog-whistle term the GOP dreams up next. Accept the inevitability of these attacks. Trying to insulate oneself from these accusations and playing defense is always a losing gambit. The best defense here is a strong offense. Biden should call out this tactic as a dishonest effort to avoid talking about how bought and paid-for the Republican Party is, then talk more about his record on corporate power. Keeping the conversation on the topics where Democrats win, and calling out any bad-faith efforts to shift it, lets Biden project confidence, relatability, and the authority of his office. Conclusion What Biden and his party need is an agenda that excites people—not just the Democratic base, but also disillusioned Independents and even many Republicans. If Biden spends the next year investigating and penalizing wrongdoing by corporations and the ultra-wealthy, he will have just that. He will definitively clarify who he stands against, and thus, who he stands for—the little guy (and gal), beaten down for far too long by rampant corporate greed. Biden should then proclaim it loudly. Some within the Democratic Party, especially the ultra-rich donor class, will naturally dismiss this proposal. We urge Biden and the rest of the party to ignore their concerns and instead look at the electoral forecasts. Something has to change, and fast, for the Democrats, or an enormous red wave will sink the party in the 2022 midterms and possibly mark the last election in which America can call itself a democracy. It is time to be brave and take on the battles Americans so desperately need from their politicians. As we’ve said before, nothing unites the people behind a leader quite like a shared enemy.

#### Here is polling data

Marx 21 (Claude Marx, 7-26-2021, "Biden’s bid to boost competition could reap political benefits," mlex, <https://mlexmarketinsight.com/news-hub/editors-picks/area-of-expertise/antitrust/bidens-bid-to-boost-competition-could-reap-political-benefits>) //bp

It mostly comes down to a five-letter word. President Joe Biden’s moves to ramp up antitrust enforcement could impact how companies do business and what people pay for goods and services. But they could also help Biden and his partisan allies get something even more valuable: votes. Biden has long made his political brand that of a pragmatic champion of the middle class. It’s a group that the Democrats have sometimes struggled to win over in recent years. While the average voter might think the Sherman Act deals with tanks, the administration is gambling that if its actions free up markets that help lower prices and create job opportunities, people will credit the Democrats. The executive order on competition outlines the administration’s priorities. Among the contents are provisions strongly encouraging the Federal Trade Commission to promote competition in the labor and repair markets and to be more rigorous in reviewing corporate mergers. And polling data indicates there’s an opportunity for Biden and his party. A recent Gallup Poll found that 73 percent of respondents were somewhat or very dissatisfied about the “size and influence of major corporations.” Last year, the poll found 58 percent of respondents had those beliefs.

### 2nc – link - youth

#### Young people are key but dems are failing on turnout – wins are key

Kilgore 3-31 (Ed Kilgore, 3-31-22, "Youth-Vote Falloff Could Be Devastating for Democrats in 2022," Intelligencer, <https://nymag.com/intelligencer/2022/03/youth-vote-falloff-could-be-devastating-for-dems-in-2022.html>) //bp

2022 MIDTERMS 12:40 P.M. Youth-Vote Falloff Could Be Devastating for Democrats in 2022 It has been nearly 14 years since the 2008 presidential election, which introduced the idea of an “Obama Coalition” of young and non-white voters that would allegedly make Democrats increasingly unbeatable as demographics shifted in the U.S. It has not, of course, worked out that way. While Democrats have indeed won the popular vote in every subsequent presidential election since 2008, they haven’t approached Obama’s 7.2 percent popular-vote margin, and they came close to losing the Electoral College in 2012 and 2020, along with actually losing it in 2016. Meanwhile, Democrats have lost two of the three midterms since 2008. And things aren’t exactly looking sunny for 2022. There are several reasons why predictions about Democrats’ increasing demographic invincibility haven’t panned out. One key problem, which became clear after the Democrats’ catastrophic 2010 midterms loss, is that they’ve aligned themselves with elements of the electorate least likely to turn out to vote in non-presidential elections. This “midterm falloff” problem with respect to young and non-white voters abated significantly in 2018, which helped to make it the rare good midterm for Democrats. Then in 2020, a different problem for Democrats began to emerge: flagging performance among non-white voters, particularly the fast-growing Latino category. This trend has made Democrats more dependent than ever on young voters, who also are disproportionately people of color and/or multiracial. Millennials and Gen-Zers together went for Biden by about 20 points in 2020 and were carried by Democrats about two-to-one in 2018. Though they aren’t identical, the two younger generational groups are more like each other than any of the older cohorts, as Ron Brownstein notes at CNN: Nearly half of Generation Z (currently defined as young people born between 1997 and 2012) are kids of color, more than one-third identify as secular without affiliation to any organized religion and a striking one-fifth in a recent Gallup survey identified as LGBTQ. Millennials (generally defined as those born between 1981 and 1996) don’t tilt quite so far toward change but are still far more diverse on each metric than older generations. Both groups are also much more likely than their predecessors to believe in a strong problem-solving government and in the urgency of challenges like climate change. They seem poised to eventually come to the rescue of Democrats as they replace the older, whiter, and more conservative cohorts that are literally beginning to die out, as Brownstein explains: The nonpartisan States of Change project … calculated that in 2016, millennials and their younger Generation Z counterparts accounted for a little less than one-third of eligible voters, far less than the nearly 45% represented by the baby boomers and older generations. By 2024, those numbers will more than flip: The group projects that millennials and Generation Z will account for nearly 45% of eligible voters, while baby boomers and older generations will shrink to about one-fourth. (Generation X, those born between 1965 and 1980, stay constant at about one-fourth of the electorate throughout that period.) But these younger people will only save Democrats if they turn out to vote. And that seems unlikely in 2022, for two reasons. First, the strong across-the-board voter turnout in the 2018 midterm election appears to be an outlier; the election was basically a referendum on Donald Trump, whom younger voters really disliked. Second, while under-30 voters are not a ripe target for the Trump-era GOP, they aren’t very fond of Joe Biden, either. The president’s approval rating among 18- to 34-year-old voters according to CNN is currently 40 percent, quite low for such a pro-Democratic group. This makes robust youth turnout even more unlikely than it would have already been. As Brownstein reports, under-30 turnout leapt from 13 percent in 2014 to 28 percent in 2018. And a study from Tufts University found that under-30 turnout also rose from 39 percent in 2016 to 50 percent in 2020. Without these surges, accompanied by a steady increase in the under-30 portion of the electorate, Republicans would almost certainly control Congress and Donald Trump would still be president. Something closer to 2014 than to 2018 turnout among young voters is more likely in 2022, particularly given the restrictions on “convenience voting” (e.g., early voting by mail or in person) so many Republican-controlled state governments are enacting, which probably affect inexperienced voters more than others. There are, however, some rays of midterm hope for Democrats. High levels of youth voting in 2018 and 2020 could help ensure that 2022 turnout won’t drop all the way back to 2014 levels, since past voting is correlated somewhat to future voting even in midterms. And one factor that boosted all sorts of Democratic turnout in 2018 — the bad policies, unsavory racism and sexism, and authoritarian contempt for democracy represented by Trump — isn’t entirely absent in 2022. This is one thing that the ex-president and his bitterest partisan opponents entirely agree on: the enormous desirability of a Trump-o-centric midterm election. Many Republicans, even those who love the man, privately wish he’d take a long vacation until mid-November. But he is almost biologically incapable of keeping a low profile. The bottom line is that generational change in the electorate is more likely than ever to help Democrats, but not until 2024. What happens in the 2022 midterms is much iffier. Biden’s party needs some good real-world news between now and November, and if at all possible, an ever more reckless Trump restlessly preparing for 2024 with his usual mix of threats and self-aggrandizing lies.

#### the plan is popular with young people – taking on big business rides their populist sentiment – key to coalitions

Berk 19 (Gerald Berk, 11-25-2019, "Antimonopoly and the Democrats," Dissent Magazine, <https://www.dissentmagazine.org/online_articles/antimonopoly-and-the-democrats>) //bp

While history has convinced me that antimonopolists better understand the development of U.S. political economy than either Marxists or liberals, it has also convinced me that every political project has its blind spots. Antimonopoly and liberal politics do not address class sufficiently. Socialist proposals are mostly unconcerned about innovation. Liberals are far too complacent about power. Each also has its strengths. Socialists show us how monopoly power oppresses labor, liberals how it impedes innovation and public problem solving, and antimonopolists how we can use existing legal and cultural resources to counter concentrated power and build a more democratic economy. The antimonopoly tradition has energized a wide spectrum of people in the orbit of the Democratic Party. Combined with other political projects, it can help mobilize young people, small business, minority voters, non-college whites in the Midwest, and rural voters. It is a mistake to gag any version of it, because doing so has the potential to suppress mobilization across the diverse coalition that is the only weapon Democrats have against the Republican Party. Democrats at war with themselves would do well to keep the antimonopoly tradition’s focus on power and building a more democratic economy in mind, independently and together. Sometimes this will necessitate vigorous debate. At other times, it will necessitate tolerance. Sometimes it will mean the same reforms, such as reinvigorating Glass–Steagall, will be interpreted differently by factions engaged in different political projects. And sometimes, it will mean surprising collaborations, like the one between Bernie Sanders and Chuck Schumer to regulate corporate stock buybacks. For socialists, liberals, and antimonopolists alike, reinvigorating the antimonopoly tradition will require more than just words. Otherwise mistrust will fester. Socialists will have to support some policies that favor entrepreneurship. Liberals will have to stand up to powerful donors who will be subject to antitrust action. Antimonopolists will have to accept some solutions to monopoly power besides antitrust, such as public ownership or utility regulation. A Democratic Party that figures out how to use the antimonopoly tradition to forge a durable coalition for a more democratic economy may have a bright future.

### 2nc – link - centrists

#### Capturing the center is key to Dems

Enten 21 (Harry Enten October 9, 2021, “Democrats have a midterm turnout problem. Being more liberal won't help.” CNN, https://www.cnn.com/2021/10/09/politics/democrats-turnout-problem-midterms-analysis/index.html)

Of course, none of this should be terribly surprising. The voters who sit out elections are more moderate overall, regardless of their party affiliation, in the Pew dataset. Therein lies the potentially good news for Democrats. The people less likely to vote as well as those who are persuadable voters are more likely to be closer to the center of the aisle. A more similar message than one might expect could work to capture both of these groups. Biden and the Democrats may need a strong one ahead of 2022.

#### Antitrust wins the center – voters from both parties like enforcement

National Law Review ‘21 April 27, 2021, “Politics in Antitrust: This Time It's Different,” https://www.natlawreview.com/article/politics-antitrust-time-it-s-different

Both Democrats and Republicans see antitrust law as a critical issue that deserves much attention. They both wish to rein in the giants of technology, ecommerce, social media, and internet search through significant legislative change and increased enforcement. But the impetus for proposed changes and enforcement actions, as expressed by the politicians themselves, is very different from one party to the next, and very different from what we have seen in the past. Sen. Amy Klobuchar (D-MN), the lead Democrat on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights, introduced legislation to “reinvigorate America’s antitrust laws and restore competition to American markets.” Her Competition and Antitrust Law Enforcement Reform Act would “give federal enforcers the resources they need to do their jobs, strengthen prohibitions on anticompetitive conduct and mergers, and make additional reforms to improve enforcement.” Antitrust reform was a major theme of Klobuchar’s presidential campaign (and now her new book), as it was for her competitors for the Democratic nomination, especially Sen. Elizabeth Warren (D-MA). More recently, certain far right Republican senators have couched their calls for change as, depending on which side of the political divide you fall, much-needed responses to anti-competitive behavior or as retaliation for actions that run counter to their political points of view. Sen. Josh Hawley (R-MO)’s Bust Up Big Tech Act seeks to ban companies that market search engines, marketplaces, and exchanges from advertising or selling their own goods and services on their websites in ways that compete with the merchants who use the platforms. He wouldn’t be the first – regardless of political affiliation – to raise these concerns. Others feel these tech juggernauts have too much power and aren’t shy about using it. In making his announcement, though, Hawley said, “Woke Big Tech companies like Google and Amazon have been coddled by Washington politicians for years. This treatment has allowed them to amass colossal amounts of power that they use to censor political opinions that they don't agree with and shut out competitors who offer consumers an alternative to the status quo.” “Woke” is one of those words that takes on different meanings depending on who’s saying it. Hawley, of course, was paying a compliment to no one. The Missouri senator and Sen. Ted Cruz (R-TX) and Sen. Mike Lee (R-UT) are drafting legislation that would end Major League Baseball’s exemption from U.S. antitrust laws, something the league has enjoyed for nearly a century. This announcement followed MLB’s decision to pull the All-Star Game out of Georgia because of the state’s new voting laws which, again, depending on where you stand, were designed either to achieve “fraud-free” elections or make it more difficult for minorities and Democrats to vote. The far right doesn’t have monopoly on seeing antitrust law as a potential weapon. As a presidential candidate, Sen. Bernie Sanders (I-VT), who criticized corporate-owned media and accused some news outlets of a bias against his campaign, vowed to clamp down on media mergers and toughen enforcement of antitrust laws against tech giants like Facebook and Google. “Today, after decades of consolidation and deregulation, just a small handful of companies control almost everything you watch, read, and download,” Sanders said in a Columbia Journalism Review editorial. “Given that reality, we should not want even more of the free press to be put under the control of a handful of corporations and ‘benevolent’ billionaires who can use their media empires to punish their critics and shield themselves from scrutiny.” With regard to who has control over political speech, Hawley and Sanders seem to have taken opposite routes to the same destination. Despite the differences between Democratic and Republican proposals and their stated motivations, the parties appear to be willing to stack hands on the need for more enforcement and scrutiny of mergers in already consolidated markets in which titans dominate. Is this anything new, really? Has antitrust law been used as a political football in the past? We do not need to look that far back to see how antitrust laws can and have been exploited by politicians for partisan or even personal purposes, rather than for consumers and healthy competition. The New York Times wrote about “bombshell testimony” in a June 25, 2020, story covering whistleblower revelations against then-President Trump and then-Attorney General Bill Barr. “John Elias, a senior career official in the antitrust division,” the Times wrote, “said Barr had improperly sought investigations into the marijuana industry and California’s dealings with automakers. ‘Personal dislike of the industry is not a valid basis upon which to ground an antitrust investigation,’ Elias said, referring to the cannabis cases.” Most market observers would agree. Jonathan B. Baker, a former chief economist at the Federal Trade Commission and the Federal Communications Commission, in a piece for a Chicago Booth School of Business publication, Promarket, said the concerns raised by Elias’ testimony “reinforce the importance of insulating antitrust from politics, which holds no matter who is in power.” “Antitrust is a powerful machine— both for maintaining competition and for advancing the interests of politicians who wrest control of its operation,” Baker wrote, noting two other presidents preceded President Trump in inserting himself into market dynamics. President Lyndon Johnson “held up the antitrust review of a bank acquisition until a newspaper publisher, who also ran one of the merging banks, agreed to reverse the paper’s editorial position against him.” President Nixon wielded his antitrust powers three times, according to Baker. Nixon ordered the Justice Department give up its challenge an International Telephone & Telegraph (ITT) deal, allegedly because the company contributed to the Republican National Convention; threatened three major television networks with antitrust litigation because of their negative coverage of his presidency; and allegedly accepted a campaign contribution from Howard Hughes in exchange for not challenging his acquisition of a Las Vegas hotel. Similar sentiments were expressed in the February 1993 issue of the American Journal of Political Science. In The Politics of U.S. Antitrust Regulation, B. Dan Wood and James E. Anderson of Texas A&M concluded, based on its resources and enforcement activity from 1970 to 1989, that the Antitrust Division’s “behavior is strongly affected by the major U.S. political actors, including the president, Congress, and courts.” Albert A. Foer is one of the leading minds in the global antitrust community. He founded the American Antitrust Institute in 1998 after spending time at a leading global law firm and in leadership positions at the Federal Trade Commission. In his now 20-year-old article -- The Politics of Antitrust in The United States: Public Choice and Public Choices, 62 U. Pitt. L. Rev. 475 – Foer discussed how politics influences the relatively apolitical world of antitrust enforcement. He discussed enforcement actions under presidents Reagan, Clinton, and Bush I, and some of the major antitrust actions in history. Despite the far-reaching effects of the antitrust law, Foer said Americans have shown it little interest in the subject. Back in 2001 when he wrote The Politics of Antitrust, antitrust wasn’t hyper-politicized, but there was no denying politics had some influence. "The approach of an election may well affect the timing of certain events by an administration,” Foer observed. “Incentive may exist to press harder to finish up certain important projects or to put off onto the next management team a few projects that might be selected for avoidance. Soon after President Reagan took office, for example, the IBM case was dropped, yet the AT&T breakup was completed."

# 2NR

#### Human nature can be changed

Schor ’10 (Julie, Prof. of Economics @ Boston College, Plenitude: The New Economics of True Wealth, pgs. 11-12)  
And we don't have to. What's odd about the narrowness of the national economic conversation is that it leaves out theoretical advances in economics and related fields that have begun to change our basic understandings of what motivates and enriches people. The policy conversation hasn't caught up to what's happening at the fore- front of the discipline. One of the hallmarks of the standard economic model, which hails from the nineteenth century, is that people are considered relatively unchanging. Basic preferences, likes and dislikes, are assumed to be stable, and don't adjust as a result of the choices people make or the circumstances in which they find themselves. People alter their behavior in response to changes in prices and incomes, to be sure, and sometimes rapidly. But there are no feedback loops from today's choices to tomorrow's desires. This accords with an old formulation of human nature as fixed, and this view still dominates the policy conversation. However, there's a growing body of research that attests to human adaptability. Newer thinking in behavioral economics, cultural evolution, and social networking that has developed as a result of interdisciplinary work in psychology, biology, and sociology yields a view of humans as far more malleable. It's the economic analogue to recent findings in neuroscience that the brain is more plastic than previously understood, or in biology that human evolution is happening on a time scale more compressed than scientists originally thought. As economic actors, we can change, too. This has profound implications for our ability to shift from one way of living to another, and to be better off in the process. It's an important part of why we can both reduce ecological impact and improve well- being. As we transform our lifestyles, we transform ourselves. Patterns of consuming, earning, or interacting that may seem unrealistic or even negative before starting down this road become feasible and appealing. Moreover, when big changes are on the table, the narrow trade-offs of the past can be superseded. If we can question consumerism, we're no longer forced to make a mandatory choice between well-being and environment. If we can admit that full-time jobs need not require so many hours, it'll be possible to slow down ecological degradation, address unemployment, and make time for family and community. If we can think about knowledge differently, we can expand social wealth far more rapidly. Stepping outside the "there is no alternative to business-as-usual" thinking that has been a straitjacket for years puts creative options into play. And it opens the doors to double and triple dividends: changes that yield benefits on more than one front. Some of the most important economic research in recent years shows that a single intervention-a community reclamation of a brownfield or planting on degraded agriculture land-can solve three problems. It regenerates an ecosystem, provides income for the restorers, and empowers people as civic actors. In dire straits on the economic and ecological fronts, we have little choice but to find a way forward that addresses both. That’s what plenitude offers.