# 1NC

### States CP

#### The fifty states and relevant territories ought to substantially increase prohibitions on anticompetitive business practices by the private sector in accordance with socialism through national coordination.

#### Create and abide by uniform guidelines and coordinate state antitrust cases in parallel fashion through the National Association of Attorneys General

#### increase funding for enforcement of state antitrust laws, including funding for state attorneys general and state courts, through legalizing deficit spending and borrowing to pay for antitrust enforcement

* **adjudicate antitrust cases arising from the aforementioned laws in a consistent manner**

#### State antitrust enforcement is constitutional and solves.

First 01 (Harry First, Professor of Law, New York University School of Law, “Delivering Remedies: The Role of the States in Antitrust Enforcement,” *George Washington Law Review*, Vol. 69, Issues 5 & 6 (October/December 2001), pp. 1004-1041)

Of course, neither Illinois Brick, nor the parens patriae provision of the 1976 Act for that matter, spoke to the states' jurisdiction to enforce state antitrust law.5 1 State law antitrust enforcement had coexisted with federal enforcement from the time that the Sherman Act was passed and the constitutionality of such state law enforcement had long been accepted.52 Thus, it should not have been surprising that after Illinois Brick a number of states revisited their own state laws and enacted statutes permitting indirect purchaser suits under state antitrust law.53

The constitutionality of state indirect purchaser legislation was presented to the Supreme Court in California v. ARC America Corp., de- cided in 1989.54 Four states filed federal antitrust actions for damages they had suffered from an alleged nationwide conspiracy to fix the price of ce- ment. Because at least some of their damages were indirect, they appended to their federal cause of action state law claims under their indirect purchaser statutes.5 Following a settlement of all federal and state claims, the states sought to participate in the settlement fund.56 On objection from the direct purchasers, the district court denied the states' indirect purchaser claims to the settlement fund, holding that state indirect purchaser laws were pre- empted by virtue of Illinois Brick.5 7 The Supreme Court reversed. 58

Pointing to "the long history of state common-law and statutory reme- dies against monopolies and unfair business practices," the Court stated that it is "plain that this is an area traditionally regulated by the States. '59 Indeed, "Congress intended the federal antitrust laws to supplement, not displace, state antitrust remedies."0 That state law might impose liability beyond what federal law provides does not conflict with any federal policy that the Court identified in prior cases. Writing for a unanimous Court, Justice White stated:

When viewed properly, Illinois Brick was a decision construing the federal antitrust laws, not a decision defining the interrelationship between the federal and state antitrust laws. The congressional pur- poses on which Illinois Brick was based provide no support for a finding that state indirect purchaser statutes are pre-empted by federal law.

The Supreme Court's decision in ARC America capped fifty years of judicial and legislative development of the jurisdiction of state antitrust en- forcers. Under federal law the states can now seek money damages for federal antitrust violations that injure them or their citizens as direct purchasers. Under state law they can claim damages suffered from antitrust violations that harm them or their citizens as indirect purchasers (if state law provides for such recoveries). The states may also be able to use consumer protection or unfair competition statutes to require defendants who engage in anticompetitive conduct that harms consumers either to disgorge their profits or to provide restitution to their victims.62 Like anti-trust indirect purchaser claims, these state claims can either be brought individually in state court or included as supplemental claims to federal antitrust violations.

Beyond seeking damages, state enforcers are likewise able to use either federal or state courts to seek injunctive relief to prevent future violations. This includes the right to seek divestitures in merger cases and the right to seek structural relief in monopolization cases. So well accepted is the exercise of this right that its assertion now goes unchallenged by defendants. 63 And, finally, individual states' antitrust laws may contain criminal provisions or civil penalties, which the states can enforce in state court.64

Indeed, at least as a statutory matter, the jurisdictional tools available to the states exceed those available to the federal antitrust enforcement agencies. The Justice Department can sue for its proprietary injuries, but it al- most never does so,65 and it has not sought to assert a parens patriae right to sue for injury to U.S. citizens (nor could it likely do so in light of the 1976 Hart-Scott-Rodino Act).66 Federal law would also presumably prevent suit for damages to the U.S. government as an indirect purchaser. There are no civil penalties available for violations of the antitrust laws,67 and the disgorgement or restitution remedy has only rarely been invoked (by the Federal Trade Commission) and is of uncertain legality.68

Similarly, when compared to private enforcement, state antitrust enforcers have stronger jurisdictional tools. The main advantage is that although the federal parens patriae claim for damages under the Hart-Scott-Rodino Act has procedural protections similar to those provided under Rule 23 for class members, such actions need not meet Rule 23's requirements, such as commonality of claims or adequacy of representation. 69 These issues are, of course, major problems in antitrust class actions.70 On the injunction side, standing presents no problems for the states when they are seeking to protect either their economy in general, or the interests of their consumers; private litigants, however, may still face hurdles.71 And on the investigative side, the states generally have broad power to use compulsory process to investigate for possible antitrust violations prior to filing a suit (similar to federal investigative power72). Private plaintiffs, of course, lack this ability.

### 1NC – T Anticompetitive

#### “Increase” requires the affirmative to augment prohibitions.

Merriam Webster Dictionary, No Date, "Definition of INCREASE," Merriam Webster, <https://www.merriam-webster.com/dictionary/increase>

Definition of increase

 (Entry 1 of 2)

[intransitive verb](https://www.merriam-webster.com/dictionary/intransitive)

1: to become progressively greater (as in size, amount, number, or intensity)

2: to multiply by the production of young

[transitive verb](https://www.merriam-webster.com/dictionary/transitive)

1: to make greater : [AUGMENT](https://www.merriam-webster.com/dictionary/augment)

2obsolete : [ENRICH](https://www.merriam-webster.com/dictionary/enrich)

#### “anticompetitive practices” are business practices that firms engage in to restrict competition to maintain or increase market position.

OECD 3 (Organization for Economic Cooperation and Development, April 24, 2003, “Anticompetitive Practices,” https://stats.oecd.org/glossary/detail.asp?ID=3145)

Definition:

Anticompetitive practices refer to a wide range of business practices in which a firm or group of firms may engage in order to restrict inter-firm competition to maintain or increase their relative market position and profits without necessarily providing goods and services at a lower cost or of higher quality.

Context:

The essence of competition entails attempts by firm(s) to gain advantage over rivals. However, the boundary of acceptable business practices may be crossed if firms contrive to artificially limit competition by not building so much on their advantages but on exploiting their market position to the disadvantage or detriment of competitors, customers and suppliers such that higher prices, reduced output, less consumer choice, loss of economic efficiency and misallocation of resources (or combinations thereof) are likely to result.

Which types of business practices are likely to be construed as being anticompetitive and, if that, as violating competition law, will vary by jurisdiction and on a case by case basis. Certain practices may be viewed as per se illegal while others may be subject to rule of reason. Resale price maintenance, for example, is viewed in most jurisdictions as being per se illegal whereas exclusive dealing may be subject to rule of reason. The standards for determining whether or not a business practice is illegal may also differ. In the United States, price fixing agreements are per se illegal whereas in Canada the agreement must cover a substantial part of the market. With these caveats in mind, competition laws in a large number of countries examine and generally seek to prevent a wide range of business practices which restrict competition. These practices are broadly classified into two groups: horizontal and vertical restraints on competition. The first group includes specific practices such as cartels, collusion, conspiracy, mergers, predatory pricing, price discrimination and price fixing agreements. The second group includes practices such as exclusive dealing, geographic market restrictions, refusal to deal/sell, resale price maintenance and tied selling.

Generally speaking, horizontal restraints on competition primarily entail other competitors in the market whereas vertical restraints entail supplier-distributor relationships. However, it should be noted that the distinction between horizontal and vertical restraints on competition is not always clear cut and practices of one type may impact on the other. For example, firms may adopt strategic behaviour to foreclose competition. They may attempt to do so by pre-empting facilities through acquisition of important sources of raw material supply or distribution channels, enter into long term contracts to purchase available inputs or capacity and engage in exclusive dealing and other practices. These practices may raise barriers to entry and entrench the market position of existing firms and/or facilitate anticompetitive arrangements.

#### Violation---they increase prohibitions on behavior other than restricting inter-firm competition to maintain or increase market position and profits.

#### That’s a voting issue for predictable limits and ground---allowing the affirmative to redefine “anticompetitive” devolves into 2As picking a new regulation every week. That structurally disadvantages the negative and decreases the quality of clash by stretching neg prep too thin.

### 1NC – Cyber DA

#### Cybersecurity is the FTC’s top focus and priority but bringing full force is key

Fath, 10-20-2021 – Kyle, counsel in the Data Privacy & Cybersecurity Practice, "Data Privacy and Cybersecurity FTC Priorities Going Forward," National Law Review, Volume XI, Number 293, <https://www.natlawreview.com/article/data-privacy-and-cybersecurity-ftc-priorities-going-forward> -- Iowa

The Federal Trade Commission (FTC) has made it clear: data privacy and cybersecurity are now a priority and will be for years to come. In the wake of PrivacyCon 2021, the FTC’s sixth annual privacy, cybersecurity and consumer protection summit, held this summer, the FTC finally took official and sweeping action on privacy and cybersecurity. In particular, the Commission recently designated eight key areas of focus for enforcement and regulatory action, three of which directly implicate privacy, cybersecurity, and consumer protection. Below, we discuss the FTC’s action and what it means for businesses, the three key areas of interest to consumer privacy that are now in the FTC’s spotlight, as well as their relation to state privacy legislation and their anticipated impact to civil litigation. Full details on PrivacyCon 2021 and the FTC’s resolutions following the summit can be found on the FTC’s website, linked here for your convenience.

The FTC’s Actions and Areas of Focus

In mid-September, the FTC voted to approve a series of resolutions, directed at key enforcement areas, including the following, each discussed in further detail below:

Children Under 18: Harmful conduct directed at children under 18 has been a source of significant public concern, now, FTC staff will similarly be able to expeditiously investigate any allegations in this important area.

Algorithmic and Biometric Bias: Allows staff to investigate allegations of bias in algorithms and biometrics. Algorithmic bias was the subject of a recent FTC blog.

Deceptive and Manipulative Conduct on the Internet: This includes, but is not limited to, the “manipulation of user interfaces,” including but not limited to dark patterns, also the subject of a recent FTC workshop.

The approval of this series of resolutions will enable the Commission “to efficiently and expeditiously investigate conduct in core FTC priority areas. Through the passage of the resolutions, the FTC has now directed that all “compulsory processes” available to it be used in connection with COPPA enforcement. This omnibus resolution mobilizes the full force of the FTC for the next ten years and gives FTC staff full authority to conduct investigations and commence enforcement actions in pursuit of this goal. The FTC has offered very little elaboration on this front, however, regarding how it will use such “compulsory processes,” which include subpoenas, civil investigative demands, and other demands for documents or testimony.

What does seems clear, however, is that the FTC is buckling down on the enforceability of its own actions. Previous remarks by Chair Lina M. Khan before the House Energy and Commerce Committee expressed frustration at the frequent hamstringing of the agency at the hands of courts in its enforcement efforts in the past. With this declaration of renewed energy, the FTC is summoning all the power it can to do its job, and we should expect to see an energized FTC kick up its patrol efforts in the near future. Businesses that conduct activities that implicate these renewed areas should be aware of the FTC’s focus and penchant for investigations and enforcement in such areas.

#### The plan derails the FTC

Alison Jones & William E. Kovacic 20, Jones is a professor at King’s College London; Kovacic is Global Competition Professor of Law and Policy, The George Washington University Law School, “Antitrust’s Implementation Blind Side: Challenges to Major Expansion of U.S. Competition Policy,” The Antitrust Bulletin, vol. 65, no. 2, SAGE Publications Inc, 06/01/2020, pp. 227–255

D. Political Backlash

As we have already indicated, the government’s prosecution of high stakes antitrust cases often inspires defendants to lobby elected officials to rein in the enforcement agency. Targets of cases that seek to impose powerful remedies have several possible paths to encourage politicians to blunt enforcement measures. One path is to seek intervention from the President. The Assistant Attorney General of the Antitrust Division serves at the will of the President, making DOJ policy dependent on the President’s continuing support. The White House ordinarily does not guide the Antitrust Division’s selection of cases, but there have been instances in which the President pressured the Division to alter course on behalf of a defendant, and did so successfully.125

The second path is to lobby the Congress. The FTC is called an “independent” regulatory agency, but Congress interprets independence in an idiosyncratic way.126 Legislators believe independence means insulation from the executive branch, not from the legislature. The FTC is dependent on a good relationship with Congress, which controls its budget and can react with hostility, and forcefully, when it disapproves of FTC litigation—particularly where it adversely affects the interests of members’ constituents. Controversial and contested cases may consequently be derailed or muted if political support for them wanes and politicians become more sympathetic to commercial interests. The FTC’s sometimes tempestuous relationship with Congress demonstrates that political coalitions favoring bold enforcement can be volatile, unpredictable, and evanescent.127 If the FTC does not manage its relationship with Congress carefully, its litigation opponents may mobilize legislative intervention that causes ambitious enforcement measures to the founder.

#### FTC is central to protecting critical infrastructure but resources are key

Waughn, 10-3-2021, Casey E., "Biden Administration Beseeches Business Leaders – Better Cybersecurity Now," Mondaq, <https://www.mondaq.com/unitedstates/security/1117036/biden-administration-beseeches-business-leaders-better-cybersecurity-now> -- Iowa

That the letter was specifically directed at business leaders is not unusual. Federal agencies have repeatedly urged business leaders that adherence to cybersecurity 'industry standards' is a legal obligation.

In July 2019, the Federal Trade Commission (FTC) announced a $700 million settlement with Equifax for deficient cybersecurity practices. As part of the settlement, the FTC mandated that Equifax's directors and officers:

be informed about any material evaluations or updates to its information security program every 12 months;

evaluate, assess and identify gaps and weaknesses in Equifax's information security program; and

certify every year for 20 years that Equifax is in compliance with the FTC's settlement.

In January 2020, the FTC announced that it would be implementing a "new and improved" approach to cybersecurity enforcement actions that requires "Board[s] or similar governing bodies" and "senior managers" to "gather detailed information about the company's information security program, so they can personally corroborate compliance" with the organization's written information security program (WISP).

Based on research that suggested the FTC's efforts to improve corporate governance on cybersecurity issues was timely and well founded, the FTC stated that it would create further incentives for high-level oversight of, and appropriate attention to, cybersecurity.

In April 2021, the FTC issued detailed guidance on the role business leaders must play in cybersecurity. In a post titled Corporate boards: Don't underestimate your role in data security oversight, the FTC stated that "[c]ontrary to popular belief, data security begins with the Board of Directors, not the IT Department."

The FTC then listed strategies that business leaders should consider implementing which included:

Build a team of stakeholders from across your organization – the team "should incorporate stakeholders from business, legal, and technology departments across the company – both high-level executives and operational experts."

Establish board-level oversight – this helps to "ensure that cybersecurity threats, defenses, and responses have the attention of those at upper echelons and get the resources needed to do the job right."

Hold regular security briefings – cybersecurity is dynamic, therefore, "[r]egular briefings prepare boards to carry out their oversight responsibility, navigate the security landscape, and prioritize threats to the company."

In addition to the letter, the White House issued a memorandum that requires federal prosecutors involved with ransomware or digital extortion investigations to:

utilize enhanced notification requirements to relevant federal taskforces of findings and developments; and

coordinate with federal agencies and taskforces, including with the Department of Justice's Criminal Division's Computer Crime and Intellectual Property Section (CCIPS).

Despite the United States Supreme Court's ruling last week limiting certain aspects of the federal government's authority to prosecute cybersecurity incidents, the letter, recent FTC guidance, and the memorandum demonstrate the central role of the federal government and business leaders in preventing and investigating cybersecurity attacks.

#### That goes nuclear, even if it fails

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

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

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

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

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

### 1NC---Advantage CP

#### The United States federal government should ban cobalt bombs, self-replication machines, gray goo, and synthetic biology testing.

#### The United States enforce measures against redistricting.

The United States federal government should implement many policy solutions to climate change and biodiversity, including regulated geoengineering and funding for development and implementation of negative emissions technology.

#### Solves environment better than the aff.

Pearce ’19 [Fred; May 29; Environmental journalist and author, citing former British Government Chief Scientist David King, Harvard University Physicist David Keith, Kelly Wanser for the Marine Cloud Brightening Project, and other academics; Yale Environment 360, “Geoengineer the Planet? More Scientists Now Say It Must Be an Option,” <https://e360.yale.edu/features/geoengineer-the-planet-more-scientists-now-say-it-must-be-an-option>]

Once seen as spooky sci-fi, geoengineering to halt runaway climate change is now being looked at with growing urgency. A spate of dire scientific warnings that the world community can no longer delay major cuts in carbon emissions, coupled with a recent surge in atmospheric concentrations of CO2, has left a growing number of scientists saying that it’s time to give the controversial technologies a serious look.

“Time is no longer on our side,” one geoengineering advocate, former British government chief scientist David King, [told a conference last fall.](https://www.edie.net/news/9/Sir-David-King--Policy-and-business-action-needed-on-climate--restoration-/) “What we do over the next 10 years will determine the future of humanity for the next 10,000 years.”

King helped secure the Paris Climate Agreement in 2015, but he no longer believes cutting planet-warming emissions is enough to stave off disaster. He is in the process of establishing a Center for Climate Repair at Cambridge University. It would be the world’s first major research center dedicated to a task that, he says, “is going to be necessary.”

Technologies earmarked for the Cambridge center’s attention include a range of efforts to restrict solar radiation from reaching the lower atmosphere, including spraying aerosols of sulphate particles into the stratosphere, and refreezing rapidly warming parts of the polar regions by deploying tall ships to pump salt particles from the ocean into polar clouds [to make them brighter.](https://www.bbc.co.uk/news/science-environment-48069663)

United States scientists are on the case, too. The National Academies last October launched a study into [sunlight reflection](http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=10162018) technologies, including their feasibility, impacts and risks, and governance requirements. Marcia McNutt, president of the National Academy of Sciences, said: “We are running out of time to mitigate catastrophic climate change. Some of these interventions… may need to be considered in future.”

The study’s prospective authors held their [first meeting](http://nas-sites.org/dels/studies/reflecting-sunlight-to-cool-earth/meetings-and-events/) in Washington, D.C., at the end of April. Speakers included David Keith, a Harvard University physicist who has developed his own patented technology for using chemistry to remove CO2 directly from the atmosphere, and Kelly Wanser of the [Marine Cloud Brightening Project](http://www.geoengineeringmonitor.org/2018/04/marine-cloud-brightening-project-geoengineering-experiment-briefing/), which is studying the efficacy of seeding clouds with sea salt and other materials to reflect more sunlight back into space. The project is preparing for future field trials.

China too has an active government-funded research program. It insists it has no current plans for deployment, but is looking, among other things, at how solar shading might [slow the rapid melting](https://royalsocietypublishing.org/doi/full/10.1098/rsta.2012.0086) of Himalayan glaciers.

Geoengineering the climate to halt global warming has been discussed almost as long as the threat of warming itself. American researchers back in the 1960s suggested floating billions of white objects such as golf balls on the oceans to reflect sunlight. In 1977, Cesare Marchetti of the Austria-based International Institute for Applied Systems Analysis discussed ways of catching all of Europe’s CO2 emissions and injecting them into [sinking Atlantic Ocean currents.](https://link.springer.com/article/10.1007/BF00162777)

In 1982, Soviet scientist Mikhail Budyko proposed filling the stratosphere with sulphate particles to reflect sunlight back into space. The first experiments to test the idea of fertilizing the oceans with iron to stimulate the growth of CO2-absorbing algae were carried out by British researchers in 1995. Two years later, Edward Teller, inventor of the hydrogen bomb, proposed putting [giant mirrors](https://www.newscientist.com/article/mg18124403-700-a-mirror-to-cool-the-world/) into space.

Still, many climate scientists until recently regarded such proposals as fringe, if not heretical, arguing that they undermine the case for urgent reductions in greenhouse gas emissions. A group of scientists writing in Nature as recently as April last year, called solar geoengineering “outlandish and unsettling… [redolent of science fiction](https://www.nature.com/articles/d41586-018-03917-8).”

But the mood is shifting. There is broad, international scientific agreement that the window of opportunity to avoid breaching the Paris climate target of staying “well below” 2 degrees Celsius (3.6 degrees Fahrenheit), is narrowing sharply. A pause in the rise in CO2 emissions that brought hope in 2015 and 2016 has ended; the increase has resumed at a time when we should be making progress toward a goal of [halving emissions by 2030](https://report.ipcc.ch/sr15/pdf/sr15_headline_statements.pdf), says Johan Rockstrom, science director of the Potsdam Institute for Climate Impacts Research. CO2 concentrations in the atmosphere — the planetary thermostat — are now at 415 parts per million (ppm) and rising by almost 3 ppm each year, reaching levels that have not been seen in 3 million years. “We have two years left to bend the curve” downward, says Rockstrom.

Some experts contend we may be approaching a moment when nothing other than geoengineering can meet the international community’s promise — made when signing the UN Climate Change Convention at the Earth Summit in 1992 — to prevent “dangerous anthropogenic interference with the climate system.” Myles Allen of Oxford University’s Environmental Change Institute says: “Every year we are not even trying to reduce emissions is another 40 billion tons of CO2 dumped into the atmosphere that we are blithely committing future generations to scrub out again.”

#### **Redistricting shatters democracy in irreversible ways – only the CP solves**

Mansbridge et al, 21 – Jane Mansbridge is Professor Emerita of Political Leadership and Democratic Values at Harvard University writing with over 100+ scholars of democracy. “Statement of Concern: The Threats to American Democracy and the Need for National Voting and Election Administration Standards,” <https://www.newamerica.org/political-reform/statements/statement-of-concern/> -- Iowa

We, the undersigned, are scholars of democracy who have watched the recent deterioration of U.S. elections and liberal democracy with growing alarm. Specifically, we have watched with deep concern as Republican-led state legislatures across the country have in recent months proposed or implemented what we consider radical changes to core electoral procedures in response to unproven and intentionally destructive allegations of a stolen election. Collectively, these initiatives are transforming several states into political systems that no longer meet the minimum conditions for free and fair elections. Hence, our entire democracy is now at risk.

When democracy breaks down, it typically takes many years, often decades, to reverse the downward spiral. In the process, violence and corruption typically flourish, and talent and wealth flee to more stable countries, undermining national prosperity. It is not just our venerated institutions and norms that are at risk—it is our future national standing, strength, and ability to compete globally.

Statutory changes in large key electoral battleground states are dangerously politicizing the process of electoral administration, with Republican-controlled legislatures giving themselves the power to override electoral outcomes on unproven allegations should Democrats win more votes. They are seeking to restrict access to the ballot, the most basic principle underlying the right of all adult American citizens to participate in our democracy. They are also putting in place criminal sentences and fines meant to intimidate and scare away poll workers and nonpartisan administrators. State legislatures have advanced initiatives that curtail voting methods now preferred by Democratic-leaning constituencies, such as early voting and mail voting. Republican lawmakers have openly talked about ensuring the “purity” and “quality” of the vote, echoing arguments widely used across the Jim Crow South as reasons for restricting the Black vote.

State legislators supporting these changes have cited the urgency of “electoral integrity” and the need to ensure that elections are secure and free of fraud. But by multiple expert judgments, the 2020 election was extremely secure and free of fraud. The reason that Republican voters have concerns is because many Republican officials, led by former President Donald Trump, have manufactured false claims of fraud, claims that have been repeatedly rejected by courts of law, and which Trump’s own lawyers have acknowledged were mere speculation when they testified about them before judges.

In future elections, these laws politicizing the administration and certification of elections could enable some state legislatures or partisan election officials to do what they failed to do in 2020: reverse the outcome of a free and fair election. Further, these laws could entrench extended minority rule, violating the basic and longstanding democratic principle that parties that get the most votes should win elections.

Democracy rests on certain elemental institutional and normative conditions. Elections must be neutrally and fairly administered. They must be free of manipulation. Every citizen who is qualified must have an equal right to vote, unhindered by obstruction. And when they lose elections, political parties and their candidates and supporters must be willing to accept defeat and acknowledge the legitimacy of the outcome. The refusal of prominent Republicans to accept the outcome of the 2020 election, and the anti-democratic laws adopted (or approaching adoption) in Arizona, Arkansas, Florida, Georgia, Iowa, Montana and Texas—and under serious consideration in other Republican-controlled states—violate these principles. More profoundly, these actions call into question whether the United States will remain a democracy. As scholars of democracy, we condemn these actions in the strongest possible terms as a betrayal of our precious democratic heritage.

The most effective remedy for these anti-democratic laws at the state level is federal action to protect equal access of all citizens to the ballot and to guarantee free and fair elections. Just as it ultimately took federal voting rights law to put an end to state-led voter suppression laws throughout the South, so federal law must once again ensure that American citizens’ voting rights do not depend on which party or faction happens to be dominant in their state legislature, and that votes are cast and counted equally, regardless of the state or jurisdiction in which a citizen happens to live. This is widely recognized as a fundamental principle of electoral integrity in democracies around the world.

A new voting rights law (such as that proposed in the John Lewis Voting Rights Act) is essential but alone is not enough. True electoral integrity demands a comprehensive set of national standards that ensure the sanctity and independence of election administration, guarantee that all voters can freely exercise their right to vote, prevent partisan gerrymandering from giving dominant parties in the states an unfair advantage in the process of drawing congressional districts, and regulate ethics and money in politics

It is always far better for major democracy reforms to be bipartisan, to give change the broadest possible legitimacy. However, in the current hyper-polarized political context such broad bipartisan support is sadly lacking. Elected Republican leaders have had numerous opportunities to repudiate Trump and his “Stop the Steal” crusade, which led to the violent attack on the U.S. Capitol on January 6. Each time, they have sidestepped the truth and enabled the lie to spread.

We urge members of Congress to do whatever is necessary—including suspending the filibuster—in order to pass national voting and election administration standards that both guarantee the vote to all Americans equally, and prevent state legislatures from manipulating the rules in order to manufacture the result they want. Our democracy is fundamentally at stake. History will judge what we do at this moment.

### 1NC – Infrastructure DA

#### Biden is investing all his PC on halting warming – it’ll narrowly pass

Romm, 10-28-2021 – Tony Romm, Sean Sullivan and Tyler Pager, "Biden unveils revised spending plan, expecting Democrats to back it," Washington Post (original), SF Gate (republished), <https://www.sfgate.com/news/article/Biden-crafts-new-spending-package-aimed-at-16571097.php> -- Iowa

WASHINGTON - President Joe Biden on Thursday unveiled a new $1.75 trillion package to overhaul the country's health-care, education, climate and tax laws, muscling through a slew of policy disagreements and internecine political feuds that had stalled his economic agenda for months. The announcement marked a critical moment in Biden's tenure, prompting the president to pay a visit to Capitol Hill and call on Democrats to adopt the spending along with a second, roughly $1.2 trillion package to improve the country's roads, bridges, pipes, ports and Internet connections. "We spent hours and hours and hours over months and months working on this," Biden said in televised remarks. "No one got everything they wanted, including me, but that's what compromise is. That's consensus, and that's what I ran on." Biden's moves reflected a pivotal decision to assume ownership of the sweeping safety-net proposal in a new way. He is investing enormous political capital in the new plan, following days of intensive, secretive meetings with key lawmakers, and ratcheting up his warnings that gun-shy Democrats risk damaging him and the party if they do not get on board. "I don't think it's hyperbole to say that the [Democratic] House and Senate majorities - and my presidency - will be determined by what happens in the next week," he told House Democrats in a closed-door meetings, according to one person in the room, who spoke on the condition of anonymity because of the sensitivity of the discussions. The president added that he expected the framework to gain the Democrats' support, emphasizing the framework had 50 votes in the Senate and telling reporters, "Everyone's on board," as he arrived on Capitol Hill. The call to action appeared to galvanize some Democrats, and the $1.75 trillion framework soon generated praise - crucially from the party's moderate and liberal ranks. Even former president Barack Obama, who has largely stayed out of the day-to-day political battles, put out a statement in support of the framework, calling it a "giant leap forward." One of the longtime holdouts, Sen. Kyrsten Sinema, D-Ariz., quickly offered positive comments about the deal, but without committing to vote for it. "After months of productive, good-faith negotiations with President Biden and the White House, we have made significant progress on the proposed budget reconciliation package," Sinema said in a statement. "I look forward to getting this done, expanding economic opportunities and helping everyday families get ahead." Sen. Joe Manchin III, D-W.Va., the other centrist holdout, similarly offered little comment, saying only, "In the hands of the House" when asked about the new framework in the Capitol on Thursday. The proposal did contain some longtime Democratic priorities, including universal prekindergarten, new sums to combat climate change and additional taxes on the ultrawealthy. But it jettisoned other items, including a plan to provide paid leave to millions of Americans. The president made the cuts to satisfy Sinema and Manchin, who were concerned about overspending, though some liberal Democrats later said they had not given up fighting for those items. With a potential end to the logjam in sight, the framework prompted House Speaker Nancy Pelosi, D-Calif., to move toward holding a vote on the companion infrastructure bill as soon as Thursday. That plan had been held up by House liberals who insisted on seeing an acceptable version of the safety-net plan first. Pelosi cited the president's planned travel to two global summits this week as a reason for swift action, suggesting that Biden's credibility on the world stage would be undermined if his legislative agenda was mired down. But forcing a vote on the infrastructure bill appeared politically risky. Liberal-leaning lawmakers reaffirmed an earlier threat that they would not vote for it unless they were satisfied with the safety-net bill, and in a closely divided Congress, their votes are pivotal. Rep. Pramila Jayapal, D-Wash., who heads the Congressional Progressive Caucus, said she expected liberal lawmakers to "enthusiastically endorse" Biden's new plan and that ultimately "we intend to vote for both bills." But progressives also said they were determined to see the final version of the safety-net bill, not just an outline, before committing to the infrastructure bill. The House Rules Committee released legislative language, but progressives feared it could still be weakened. That prompted them to say they would only vote on the two bills - the infrastructure plan and the safety-net bill - in tandem, as part of a linked package. The timing of the votes remained uncertain as House members departed for the weekend. The architect of the original $3.5 trillion plan, Sen. Bernie Sanders, I-Vt., encouraged House Democrats to hold off on voting until "clear language" is finalized on the safety-net bill with the support of 50 senators. He said he continues to work to advance issues including a more robust expansion of Medicare, but he also described the $1.75 trillion compromise as transformational, saying it is "the kind of legislation [that hasn't] passed in Congress since the 1960s." Democrats are hopeful that another $100 billion will be included in the package for immigration measures, bringing its total cost to $1.85 trillion, but that money could be excluded for procedural reasons. The plan includes a provision for undocumented immigrants who arrived before 2010 to apply for a green card, a precursor to citizenship. The Senate parliamentarian has previously rejected such an item, but some Democrats view its inclusion as a placeholder of sorts, potentially to be replaced by a narrower measure that would provide protected status but not a path to citizenship. With details of the bill still to be filled in, it was far from clear whether the White House had fully locked in the deal. Biden, however, still projected confidence as he exited the roughly hour-long gathering with House Democrats. "I think we're going to be in good shape," he told reporters. Many of the components in the retooled blueprint originate in the proposals Biden put forward in the spring. The ideas correspond with promises the president and other Democratic candidates made in the course of the 2020 election, when Biden ran on a refrain to Build Back Better. But the policy framework that White House aides unfurled Thursday is a significant departure from the roughly $3.5 trillion that the president and many top party lawmakers initially sought. Many of the cuts reflected a deep ideological divide between Democratic liberals, who saw this as a fleeting chance to enact an ambitious agenda, and moderates, who repeatedly tried to dial back the spending. Left-leaning lawmakers led by Sanders initially hoped to leverage their rare - if razor-thin - majorities in the House and Senate to reshape broad swaths of the U.S. economy. In the earliest days of the debate, they had even envisioned a $6 trillion package that they likened to the Great Society and New Deal programs of generations past. But the party's liberal bloc ultimately had no choice but to scale back some of its ambitions to assuage Sinema and Manchin. The duo demanded steep spending cuts and other policy changes in exchange for their votes in the Senate, which is divided 50-50 between the parties and where Vice President Kamala Harris would break any tie. Thursday's new framework includes prekindergarten programs that White House aides described as part of the largest one-time education investment since the creation of public high school. The $1.75 trillion plan also includes new aid to help families afford child care and extends tax credits that millions of parents are receiving in the form of monthly checks. When it comes to health care, the White House plan expands Medicare to cover new hearing benefits. The plan would lengthen the life of tax credits that have helped roughly 9 million Americans afford health insurance purchased on the Affordable Care Act exchanges. And it would provide new tax credits to help roughly 4 million low-income people afford health insurance in a dozen states that have not expanded Medicaid under the ACA. The White House has endorsed roughly $555 billion to address climate change, including tax changes that officials said would help the country reach Biden's goal to halve carbon emissions by 2030. That part of the package is especially critical to the president as he takes part in a major global climate summit next week. In unveiling the details of its new spending plans, White House officials took great care to stress that the entire $1.75 trillion is financed in full. They aim to pay for the package through a variety of new tax policies, including newly proposed rules that require companies to pay a minimum 15% tax - seeking to address the fact some profitable, multinational corporations use creative accounting to lower their tax burdens to zero. The idea is a significant departure from the rate increases Biden initially sought as part of a campaign pledge to unwind the tax cuts enacted under President Donald Trump in 2017. The White House also backed off a plan to apply a new billionaires' income tax to roughly 700 Americans, including Amazon founder Jeff Bezos and Tesla founder and CEO Elon Musk. (Bezos owns The Washington Post.) Instead, they proposed a special 5% rate for Americans with income above $10 million and an additional 3% surtax for those above $25 million. A long slog still awaits lawmakers to turn their deal into a bill, then shepherd it through Congress, a fraught process where the Democrats' slim majorities still leave little room for political error. Pelosi has just a three-vote margin, and Senate Majority Leader Charles Schumer, D-N.Y., possesses only a tiebreaking advantage, meaning Democrats must stay together if they hope to deliver a package that Biden in recent days has described as transformational.

#### Antitrust decks PC and tanks agenda

Carstensen, 21 – Peter C. Carstensen is Chair in Law Emeritus, University of Wisconsin Law School. “The “Ought” and “Is Likely” of Biden Antitrust,” Concurrences, February, N° 1-2021 On-Topic The new US antitrust administration, <https://www.concurrences.com/en/review/issues/no-1-2021/on-topic/the-new-us-antitrust-administration-en#carstensen> – Iowa

12. But given a hostile judiciary, the agencies are likely to limit their challenges to the most obvious cases. Important cases will die on the courthouse steps without ever getting into court. To be sure, the agencies are less likely to waste time investigating minor marijuana mergers and to focus resources on more important matters. The emergent judicial demands for detailed proof of actual adverse competitive effects will limit the scope of what can be done. The resources to develop a major case in light of these expectations will be significant and so constrain the agencies further. Thus, while merger enforcement may see an uptick especially where the merger involves two major direct competitors in more than moderately concentrated markets, the incentives to pursue vertical or potential competition cases will be very limited. Similarly, despite the growing recognition of how dominant firms, especially in the high-tech arena, buy up nascent competitors, the current standards for merger analysis will make such challenges very unlikely.

13. Given the American Express decision, the burden of challenging anticompetitive vertical restraints is likely to deter the enforcers from following up on the Dentsply [89] and McWane [90] cases except, where, as in those cases, a clear monopoly existed. Given existing market concentrations in many industries, this will result in the continuation of a plethora of harmful restraints.

14. Similarly, despite bipartisan murmurs about competitive issues, the potential in a closely divided Congress that any major initiatives will survive is limited at best. In part the challenge here is how the Biden administration will rank its commitments. If it were to make reform of competition law a major and primary commitment, it would have to trade off other goals, which might include health care reform or increases in the minimum wage. It is likely in this circumstance the new administration, like the Obama administration’s abandonment of the pro-competitive rules proposed under the PSA, would elect to give up stricter competition rules in order to achieve other legislative priorities.

15. Another key to a robust commitment to workable competition is the choice of cabinet and other key administrative positions. Here as well, the early signs are not entirely encouraging. In selecting Tom Vilsack to return as secretary of agriculture, the president has embraced a friend of the large corporate interests dominating agriculture who has spent the last four years in a highly lucrative position advancing their interests. Given the desperate need for pro-competitive rules to implement the PSA and control exploitation of dairy farmers through milk-market orders, the return of Vilsack is not good news. Who will head the FTC and who will be the attorney general and assistant attorney general for antitrust is still unknown, but if those picks are also centrists with strong links to corporate America the hope for robust enforcement of competition law will further attenuate!

16. In sum, this is a pessimistic prognostication for the likely Biden antitrust enforcement agenda. There is much that ought to be done. But this requires a willingness to take major enforcement risks, to invest significant political capital in the legislative process, and to select leaders who are committed to advancing the public interest in fair, efficient and dynamically competitive markets. The early signs are that the new administration will be no more committed to robust competition policy than the Obama administration. Events may force a more vigorous policy—I will cling to that hope as the Biden administration takes shape.

#### PC is make or break for meaningful climate action

Okun and Ross, 9-7-21 – Eli Okun and Garrett Ross, POLITICO Playbook (PM), “Playbook PM: Biden’s climate/infrastructure challenge,” <https://www.politico.com/newsletters/playbook-pm/2021/09/07/bidens-climate-infrastructure-challenge-494225> -- Iowa

President JOE BIDEN is putting climate change and his infrastructure agenda front and center today as he journeys to New Jersey and New York to survey Ida’s devastating damage across several communities.

It’s a moment that lays bare both the power and the pitfalls of Biden’s approach to this global existential threat.

First, the power: This summer, nearly a third of Americans suffered an extreme weather event fueled by climate change — massive fires in California, flooding throughout the Midwest and Northeast, supercharged hurricanes on the Gulf Coast and so on.

All of which means that as Biden marshals the bully pulpit to spotlight the ways in which climate change is already altering our lives, he has plenty of tangible examples to draw from.

“For decades, scientists have warned of extreme weather — would be more extreme, and climate change was here. And we’re living through it now,” Biden said in New Jersey this afternoon. “We don’t have any more time. … We’re at one of those inflection points where we either act, or we’re gonna be in real, real trouble.”

Now, the potential pitfalls: As congressional Democrats gear up for a crucial few weeks in which they’ll craft their massive $3.5 trillion reconciliation bill, the White House is linking climate disaster directly to its Build Back Better policy agenda — both the spending package and the bipartisan infrastructure bill that already passed the Senate.

That’s where things get dicier. We don’t need to remind you how difficult it will be for Democrats to thread the needle and get these bills to the president’s desk.

— If Biden and Democratic leaders go too big with their climate planks in the infrastructure bill, they risk losing the support of the moderate JOE MANCHIN types. (That, too, faces its own political obstacles: Speaker NANCY PELOSI this morning, when a reporter indicated she’d have to lower the reconciliation price tag to accommodate moderates, simply responded: “Why?”)

— The perils of going too small, on the other hand, are neatly exemplified by this NYT story about electric cars , a key piece of the economy-wide shift ahead that’s necessary to tamp down emissions and combat climate change: “The country has tens of thousands of public charging stations — the electric car equivalent of gas pumps — with about 110,000 chargers. But energy and auto experts say that number needs to be at least five to 10 times as big to achieve the president’s goal,” write Niraj Chokshi, Matthew Goldstein and Erin Woo. “Building that many will cost tens of billions of dollars, far more than the $7.5 billion that lawmakers have set aside in the infrastructure bill.”

With a crammed legislative calendar, the White House will have to keep the pressure on to make sure meaningful climate provisions don’t fall by the wayside — as seems likely to happen with legislation concerning abortion rights, police reform, immigration reform and raising the minimum wage.

— Our colleagues Anita Kumar and Chris Cadelago have more on “Biden’s growing policy backlog” — and the political risks for Democrats if they let down key constituencies.

Asked this morning how he’d win over Democrats on infrastructure, Biden said simply, “[T]he sun is going to come out tomorrow,” per pooler Brian Bennett of Time. That’s true. But he’s just gotta make sure it’s not warming the earth too quickly.

#### Warming causes extinction

Bryce, 20 – Emma, citing Nelson, Roman, and Kemp---Cassidy *Nelson* is Co-lead of the biosecurity team at Oxford), Sabin *Roman* earned a PhD in Complex Systems Simulation from the University of Southampton, and both Roman and Luke *Kemp* are research associates at the Cambridge University. "What Could Drive Humans to Extinction?" Real Clear Science, 7-27-2020, <https://www.realclearscience.com/articles/2020/07/27/what_could_drive_humans_to_extinction.html> -- Iowa

Nuclear war

An existential risk is different to what we might think of as a "regular" hazard or threat, explained Luke Kemp, a research associate at the Centre for the Study of Existential Risk at Cambridge University in the United Kingdom. Kemp studies historical civilizational collapse and the risk posed by climate change in the present day. "A risk in the typical terminology is supposed to be composed of a hazard, a vulnerability and an exposure," he told Live Science. "You can think about this in terms of an asteroid strike. So the hazard itself is the asteroid. The vulnerability is our inability to stop it from occurring — the lack of an intervention system. And our exposure is the fact that it actually hits the Earth in some way, shape or form."

Take nuclear war, which history and popular culture have etched onto our minds as one of the biggest potential risks to human survival. Our vulnerability to this threat grows if countries produce highly-enriched uranium, and as political tensions between nations escalate. That vulnerability determines our exposure.

As is the case for all existential risks, there aren't hard estimates available on how much of Earth's population a nuclear firestorm might eliminate. But it's expected that the effects of a large-scale nuclear winter — the period of freezing temperatures and limited food production that would follow a war, caused by a smoky nuclear haze blocking sunlight from reaching the Earth — would be profound. "From most of the modeling I've seen, it would be absolutely horrendous. It could lead to the death of large swathes of humanity. But it seems unlikely that it by itself would lead to extinction." Kemp said.

Pandemics The misuse of biotechnology is another existential risk that keeps researchers up at night. This is technology that harnesses biology to make new products. One in particular concerns Cassidy Nelson: the abuse of biotechnology to engineer deadly, quick-spreading pathogens. "I worry about a whole range of different pandemic scenarios. But I do think the ones that could be man-made are possibly the greatest threat we could have from biology this century," she said. As acting co-lead of the biosecurity team at the Future of Humanity Institute at the University of Oxford in the United Kingdom, Nelson researches biosecurity issues that face humanity, such as new infectious diseases, pandemics and biological weapons. She recognizes that a pathogen that's been specifically engineered to be as contagious and deadly as possible could be far more damaging than a natural pathogen, potentially dispatching large swathes of Earth's population in limited time. "Nature is pretty phenomenal at coming up with pathogens through natural selection. It's terrible when it does. But it doesn't have this kind of direct 'intent,'" Nelson explained. "My concern would be if you had a bad actor who intentionally tried to design a pathogen to have as much negative impact as possible, through how contagious it was, and how deadly it was.” But despite the fear that might create — especially in our currently pandemic-stricken world — she believes that the probability that this would occur is slim. (It's also worth mentioning that all evidence points to the fact that COVID-19 wasn't created in a lab.) While the scientific and technological advances are steadily lowering the threshold for people to be able to do this, "that also means that our capabilities for doing something about it are rising gradually," she said. "That gives me a sense of hope, that if we could actually get on top [of it], that risk balance could go in our favor." Still, the magnitude of the potential threat keeps researchers' attention trained on this risk.

From climate change to AI

A tour of the threats to human survival can hardly exclude climate change, a phenomenon that (is) already driving the decline and extinction of multiple species across the planet. Could it hurl humanity toward the same fate?

The accompaniments to climate change — food insecurity, water scarcity, and extreme weather events — are set to increasingly threaten human survival, at regional scales. But looking to the future, climate change is also what Kemp described as an "existential risk multiplier" at global scales, meaning that it amplifies other threats to humanity's survival. "It does appear to have all these relationships to both conflict as well as political change, which just makes the world a much more dangerous place to be." Imagine: food or water scarcity intensifying international tensions, and triggering nuclear wars with potentially enormous human fatalities.

This way of thinking about extinction highlights the interconnectedness of existential risks. As Kemp hinted before, it's unlikely that a mass extinction event would result from a single calamity like a nuclear war or pandemic. Rather, history shows us that most civilizational collapses are driven by several interwoven factors. And extinction as we typically imagine it — the rapid annihilation of everyone on Earth — is just one way it could play out.

### 1NC---Anarchism K

#### The United States federal government should abolish itself, including safely destroying all its nuclear weapons.

#### Nationalizing the private sector naturalizes hierarchical social relations that make war and interpersonal violence inevitable---reform makes it worse---only complete withdrawal solves

Robinson 10 (Andrew; political theorist and activist based in the UK, *In Theory: Anarchism, war and the state*, https://ceasefiremagazine.co.uk/anarchism-war-and-the-state/)

In response to a common misconception, it is not true that anarchists oppose the state because they are naïve about human nature. Anarchist views about human nature are widely variant. Objections to the state can be convincing based on many different views, such as distrusting people to hold too much power without abusing it. Statists might be said to have a dual conception of human nature: the good people are trusted with excessive power so as to disempower the bad people. Statism is thus associated with hierarchical differentiations of people. Further, the objection is not simply to states as institutions but to state-like ways of relating and acting: in some accounts, the state is a social relation. In anarchist theory, states are viewed as expressions of hierarchical, oppressive social logics. They are forces of decomposition, which tend to attack or break down alternative, horizontal social relations. They are also based on ‘reactive’ emotional forces of suspicion, hatred and aggression which they channel to produce warlike relations among people. They also turn on one another, accumulating wealth by pillaging other states or societies. Against such state violence, anarchist strategies often seek to find or form focal-points for social power which can counterbalance or draw energies away from state power. These focal-points necessarily involve living and acting in non-militarist, non-authoritarian ways. In Statism and Anarchy, Bakunin portrays the modern state as primarily military, and closely connected to the ruling class. As a military force, the state is necessarily aggressive, competing with other states for power. It produces moral and intellectual decay through its corrupting power. The extent of this decay depends on the extent to which the state’s way of thinking filters down through society, a process which is strongest in the most militaristic states. The ‘people’, primarily meaning the excluded and powerless, are for Bakunin a potential counterpoint to the state, and can destroy it in insurrection. Kropotkin similarly argues that the state, or ‘political principle’ (vertical association or hierarchy), is counterposed to society, or the ‘social principle’ (horizontal association or affinity). In The State: Its Historic Role, he argues that the state is ‘synonymous with war’. The state brings peace, if at all, only as lifeless dominance in a ‘colourless, lifeless whole’. Social networks bring effervescent life, whereas states bring death through structural violence and pillage. Since the state cannot tolerate other sources of power, it wages constant war against social networks as they arise. There is thus a constant zero-sum struggle between the state as a force of control and impoverishment and social networks as spaces for freedom and creativity. Local communities have capabilities for self-defence and/or peacebuilding. Although wars can be fought outside or against states, they have a different significance, enlivening people in the defence of liberty rather than disempowering them through its destruction. Stirner’s argument is rather different. In The Ego and its Own, he starts from a critique of social roles and categories, termed ‘spooks’ in his work, to derive a critique of submission to overarching categories of all kinds. Stirner is what would today be called an ‘anti-essentialist’, an opponent of fixed labels and of the privileging of some aspects of a person over others. States are rejected as bearers of particular categories which are wrongly accorded a greater status than other categories. Further, sacrifices for the state are always matters of the state’s self-interest. By claiming a monopoly on violence, the state pursues self-interested violence at the expense of its subjects. Tolstoy’s Christian Anarcho-Pacifism draws similar distinctions, but characterises the anti-state pole rather differently. For Tolstoy, the state’s ‘law of violence’ stands against a ‘law of love’, with each expressing a particular emotional climate and set of passions. States embody ‘low passions’ such as hatred (often channelled against outsiders using nationalism), against which love provides a basis for peace and happiness. Love is expressed in acts such as conscientious objection, withdrawing the social activity on which state violence is based. Anarchists Emma Goldman and Alexander Berkman were central in anti-conscription activism in First World War America and were jailed as prisoners of conscience. Their anti-militarist critiques placed a strong emphasis on socialist criticisms of the capitalistic basis of war. Elites use irrational prejudices to manipulate people into fighting on their behalf. Rudolf Rocker wrote an influential anarchist critique of nationalism around the same time, portraying the state as distorting legitimate particularisms into hateful chauvinisms. Also in this period, Randolph Bourne popularised the phrase ‘war is the health of the state’. In an unfinished work titled The State, he argued that the state demands ‘mystic[al] devotion’, which war is a means to realise. In war, the permanent state machine displaces party competition and comes to monopolise public life. Its main aim is not victory, but the ‘spiritual compulsion’ bound up with the ideal of the state, with the triumph of a ‘herd’ mentality over creativity and difference. The outpouring of irrational, reactive forces is managed by nationalistic elites for their own benefit. With fascism overrunning Europe, the leftist psychoanalyst Wilhelm Reich pioneered a sexual-liberationist critique of militaristic states in his Mass Psychology of Fascism. Reich views repressive social systems as enabled by repressive biological and emotional structures through which people prevent themselves from feeling emotions. Fascism emerges from a complete identification with state power and the leader, a pattern derived from identification with the father in patriarchal, authoritarian families. Such families train people to channel attachments vertically rather than horizontally. More recently, Klaus Theweleit used this approach to interpret the masculine violence of proto-fascist groups as an attempt to seek existential security in categories of purity and displays of superiority over demonised others. On a similar line of thought, authors from the Frankfurt School have argued that industrialised war and genocide throw doubt on the benevolence of modernity. Adorno links war to the desire to dominate nature. Fromm argues that humanity’s survival is put at risk by a peculiarly human type of malevolent aggression arising from alienation. Marcuse critiques the discourse of war as a kind of doublespeak, and interprets modern war as a self-frustrating product of the frustration-aggression complex. Frustration arising from capitalist life is channelled and rendered socially functional through military aggression, but cannot be alleviated by such aggression because human means of war have been replaced with technological means. War thus tends towards repetition and escalation. Walter Benjamin’s ‘Critique of Violence’ distinguishes between three types of violence or effective action. States are founded in law-making violence which posits their own command as the law, are maintained by law-preserving violence which maintains a status-quo through small acts of enforcement, and can be shattered by law-destroying violence (such as a general strike). For Benjamin, the state is based on reactive attachments, here interpreted as power over life for the sake of power, and is fearful, becoming more authoritarian over time as it becomes afraid of the emergence of counter-powers. Law-making violence is instrumental, whereas law-destroying violence is expressive, directing itself against the capability to use law-making or preserving violence. The theory of the state as a source of social decomposition by means of social war is extended by Antonio Negri in his 1970s-era works. Negri views state violence as a means to preserve capitalist domination as a kind of irrational social command over labour. The new form of the state, the ‘crisis-state’, is geared to a permanent state of exception which simultaneously causes and wards off extreme risks of destruction such as nuclear war. It also forms an internal warfare state directed at forces of life, autonomous social movements, with which it is in an irreducible antagonism. In this phase, Negri views such movements as tending to become an armed society counterposed to the state. This view of radical antagonism fades in Negri’s more recent work, but still in Hardt and Negri’s Empire and Multitude, the state is deemed to be waging an unwinnable, unlimited global war indistinguishable from policing. Also from an autonomist standpoint, the Midnight Notes Collective have argued that recent wars are means for preserving Northern monopolies on advanced technologies by playing on risks of weapons proliferation, or are resource wars focused on the enclosure and exploitation of resources. The idea of the ‘state of exception’ has been expanded by Giorgio Agamben. Looking at autonomy more broadly, alternatives to the state also emerge in studies of stateless indigenous social groups. There is substantial debate on whether such groups are warlike, with scholars arguing that certain groups are extremely peaceful or engage only in ritualised forms of combat. Clastres’ theory of indigenous warfare stands out in showing the difference between indigenous and statist types of war. In his theory, indigenous war is a way of asserting the difference and autonomy of each village or band, placing an obstacle in the way of state-formation by ensuring that power remains diffuse. Statist war, in contrast, causes ethnocide, which is inscribed in the nature of the state as the dissolution of the many into the one. Autonomous social movements such as La Ruta Pacifica also offer autonomous responses to war. In this group’s discourse, social weaving is theorised as a way of counterposing energies of hope to those which sustain the permanent state of war in Colombia. Their activities focus on morale-boosting, emotional repair, collective mourning and working through fear. They believe that violence decomposes social relations, so that power can be exercised by recomposing relations. Noam Chomsky is perhaps the best-known anarchist critic of imperialist wars. Chomsky’s work focuses on exposing the lies and distortions of political and media accounts of wars, focusing on the empirical rebuttal of false claims. Chomsky focused on economic self-interest as the main motive for warmongering, portraying the military-industrial complex as a financial racket. As well as direct resource grabs, the American war-machine is directed at making the current world-system seem inescapable by eliminating ‘the threat of a good example’, of a country which succeeds without playing America’s game. To allow such warmongering, illusions are systematically manufactured through distorted media coverage. Such ideologies can also be self-perpetuating, particularly among the foreign policy ‘backroom boys’, causing wars through their own dynamic even where there is little economic or geostrategic benefit. The insurrectionist anarchist Alfredo Bonanno provides another contemporary theory of anarchism and war. In Bonanno’s theory, affirmation of life goes hand-in-hand with assaults on structures of power and alienation. Insurrection is viewed as the point of explosion of accumulated discontent. Struggle must not, however, reproduce militarist approaches which are ‘the dominion of death’. Bonanno also interprets ethno-religious civil wars in terms of the mistaken mapping of the desire for revolt onto misleading ethno-religious categories. Nationalist wars can be manufactured to defuse the ‘powder-keg’ of revolt, or can complicate rebellions against the powerful. In poststructuralism, war is critiqued as part of a mechanism of logistical control through which diffuse hierarchical apparatuses reshape society. Deleuze and Guattari view states as counterposed to autonomous war-machines of the kind discussed by Clastres. The state also captures such war-machines, turning them into forces of reactive desire for its own projects of ‘antiproduction’ or decomposition. War-machines captured by states become agencies of “war for war’s sake”, tending towards total destruction. Virilio treats the military class as an important social force with its own logic or ‘essence’ which it seeks to impose on society. The method of the military class is not simply to defeat enemies but to control and rearrange space so as to disempower enemies in advance or corrode their affirmative energies. This is achieved, for instance, by creating ecologically inhospitable spaces subject to control, in place of dense ecosystems. The military is thus counterposed to popular defence, which has a different logic based on dense ecosystemic spaces giving strategic advantages over attackers. Today, popular defence has recomposed as insurrection, in cases such as Vietnam and Palestine, and has as its goal the destruction of military control over space. Baudrillard argues that states cause not ‘war’ (which implies an adversarial and symbolic element) but ‘non-war’, a kind of destructive violence in which the enemy is not recognised as an agent but instead, systematically disempowered by technological means. ‘Non-war’ is pursued as a means to systemic dominance, but is compromised by its incapacity for dialogue. One can summarise these various views through a few leitmotifs they have in common. Firstly, anarchist views of war see the state as a force for repressive control, in the interests of the state itself or of a ruling class or elite. Such states find themselves in constant war with other kinds of social forces, and sometimes with other states too. They thus use war as a kind of crisis-management, to control societies and maintain an overall system of control. States are based on, or else produce for their own ends, reactive emotional dispositions of aggression, fear and ‘herd’ morality which find their apex in war. States, especially warfare-states, tend to disempower and sap energies from other social forces and to decompose social relations. Against such powers, people can activate counter-powers, either as forces in a relation of non-militarist war with the state, or as networks which withdraw the everyday power on which the state depends.

## Fascism

### Top Level

#### The military would launch a coup and use nuclear weapons against any resistance – extinction

Hailwood, Liverpool University Philosophy Lecturer, 2003[Simon, "Eco-Anarchism and Liberal Reformism," Ecotheology 8.2 (2003) 224-241, EBSCO, accessed: 9-14-12]

Perhaps it will be thought I am hiding behind an abstract (bourgeois) conception of voluntarism and simply ignoring the greater radical edge of eco-anarchism, wherein lies its greater appeal. But the more the greater radicalness of eco-anarchist, over eco-reformist, activity is emphasized, the more it slides back into unrealistic utopianism. Take the following ‘major problem’ for eco-reformers (who produce policy suggestions that state personnel ﬁnd too radical) identiﬁed by Carter: ‘How can the state be employed to put such radical policies into effect when the whole complex structure appears to have been developed in order to pursue as effectively as possible the opposite course?’(Carter 1999: 294). Eco-reformism therefore seems doomed to failure. But although reactionary tendencies of state personnel are a problem for ecoreformists (as are illiberal tendencies of many state personnel within ‘liberal’ states a problem for liberals), it is hard to see Carter’s ecoanarchist alternative as anything but more problematic. Eco-anarchists need to oppose the state and the other elements of the environmentally hazardous dynamic. This seems to cash out in the aforementioned ‘preﬁguring cooperative autonomy’, with a general ‘radical disobedience’ as its most effectively transformative feature (Carter 1999: 304-6). I want to emphasize two problems with this.

Firstly, it is not just state personnel who tend to balk at radical activity that seems to undermine their immediate material interests. We can expect many needing to make a living for themselves and their family to be reluctant to ‘radically disobey’ the competitive, hierarchical and difﬁdent relationships and ‘hard’, ‘non-convivial’, technologies constituting their immediately available opportunities. This ‘situational logic’ applies even when they have Green sympathies. Secondly, widespread radical disobedience is problematic for just the reason it is supposed to be necessary: one cannot just explain the situation to state personnel (and other powerful actors in the dynamic), with any hope they will act accordingly. They are too locked into the dynamic for it to be rational to expect them to be rational (or moral), other than in ways internal to the dynamic. But then they are likely to view any truly widespread upsurge in radical disobedience as a huge threat requiring a military response. Perhaps they will not succeed in suppressing the disobedience, and they will feel their backs against the wall. But it is unclear how the presence of radically de-stabilized and well-armed hierarchical power structures (viewed with hungry interest by other such structures) will help. War (especially nuclear war) is the greatest threat to the environment, as Carter knows. Thus it is necessary to assume some degree of rationality on the part of the powerful in order for the strategy of widespread radical disobedience itself to be rational. If we assume that then it is reasonable also to present the case for change within the system, and ﬁnd as many ways as possible to encourage thinking in the right direction as a precursor to radical policy change. Carter apparently thinks this is to increase the likelihood of a military coup, such being the probable result of focusing on eco-reform with a view to radicalizing state policy in a Green direction (Carter 1999: 294- 95). But surely a military coup is more likely as a result of a large-scale, if non-violent (although complete non-violence is unlikely), confrontation with the state and those other elements of the dynamic involved in maintaining the supremacy of its coercive forces.

### Turn

#### Capitalism is sustainable---recent data proves we’re entering the golden age

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The past 30 years have seen immense progress in improving the quality of life for much of humanity. Extreme poverty — the number of people living on less than $1.90 per day — has fallen by nearly two-thirds, from 1.9 billion to around 650 million. Life expectancy has risen in most of the world, along with literacy and access to education, while infant mortality has fallen. Despite perceptions to the contrary, the average person born today is likely to have access to more opportunities and have a better quality of life than at any other point in human history. Much of this increase in human wellbeing has been propelled by rapid economic growth driven largely by state-led industrial policy, particularly in poor-to-middle income countries. However, this growth has come at a cost: between 1990 and 2019, global emissions of CO2 increased by 56%. Historically, economic growth has been closely linked to increased energy consumption — and increased CO2 emissions in particular — leading some to argue that a more prosperous world is one that necessarily has more impacts on our natural environment and climate. There is a lively academic debate about our ability to “absolutely decouple” emissions and growth — that is, the extent to which the adoption of clean energy technology can allow emissions to decline while economic growth continues. Over the past 15 years, however, something has begun to change. Rather than a 21st century dominated by coal that energy modelers foresaw, global coal use peaked in 2013 and is now in structural decline. We have succeeded in making clean energy cheap, with solar power and battery storage costs falling 10-fold since 2009. The world produced more electricity from clean energy — solar, wind, hydro, and nuclear — than from coal over the past two years. And, according to some major oil companies, peak oil is upon us — not because we have run out of cheap oil to produce, but because demand is falling and companies expect further decline as consumers increasingly shift to electric vehicles. The world has long been experiencing a relative decoupling between economic growth and CO2 emissions, with the emissions per unit of GDP falling for the past 60 years. This is the case even in countries like India and China that have been undergoing rapid economic growth. But relative decoupling alone is inadequate in a world where global CO2 emissions need to peak and decline in the next decade to give us any chance at limiting warming to well below 2℃, in line with Paris Agreement targets. Thankfully, there is increasing evidence that the world is on track to absolutely decouple CO2 emissions and economic growth — with global CO2 emissions potentially having peaked in 2019 and unlikely to increase substantially in the coming decade. While an emissions peak is just the first and easiest step towards eventually reaching the net-zero emissions required to stop the world from continuing to warm, it demonstrates that linkages between emissions and economic activity are not an immutable law, but rather simply a result of our current means of energy production. In recent years we have seen more and more examples of absolute decoupling — economic growth accompanied by falling CO2 emissions. Since 2005, 32 countries with a population of at least one million people have absolutely decoupled emissions from economic growth, both for terrestrial emissions (those within national borders) and consumption emissions (emissions embodied in the goods consumed in a country). This includes the United States, Japan, Mexico, Germany, United Kingdom, France, Spain, Poland, Romania, Netherlands, Belgium, Portugal, Sweden, Hungary, Belarus, Austria, Bulgaria, El Salvador, Singapore, Denmark, Finland, Slovakia, Norway, Ireland, New Zealand, Croatia, Jamaica, Lithuania, Slovenia, Latvia, Estonia, and Cyprus. Figure 1, below, shows the declines in territorial emissions (blue) and increases in GDP (red). To qualify as having experienced absolute decoupling, we require countries included in this analysis to pass four separate filters: a population of at least one million (to focus the analysis on more representative cases), declining territorial emissions over the 2005-2019 period (based on a linear regression), declining consumption emissions, and increasing real GDP (on a purchasing power parity basis, using constant 2017 international $USD). We chose not to include 2020 in this analysis because it is not particularly representative of longer-term trends, and consumption and territorial emissions estimates are not yet available for many countries. There is a wide range of rates of economic growth between 2005-2019 among countries experiencing absolute decoupling. Somewhat counterintuitively, there is no significant relationship between the rate of economic growth and the magnitude of emissions reductions within the group. While it is unlikely that there is not at least some linkage between the two factors, there are plenty of examples of countries (e.g., Singapore, Romania, and Ireland) experiencing both extremely rapid economic growth and large reductions in CO2 emissions. One of the primary criticisms of some prior analyses of absolute decoupling is that they ignore leakage. Specifically, the offshoring of manufacturing from high-income countries over the past three decades to countries like China has led to “illusory” drops in emissions, where the emissions associated with high-income country consumption are simply shipped overseas and no longer show up in territorial emissions accounting. There is some truth in this critique, as there was a large increase in emissions embodied in imports from developing countries between 1990 and 2005. After 2005, however, structural changes in China and a growing domestic market led to a reversal of these trends; the amount of emissions “exported” from developed countries to developing countries has actually declined over the past 15 years. This means that, for many countries, both territorial emissions and consumption emissions (which include any emissions “exported” to other countries) have jointly declined. In fact, on average, consumption emissions have been declining slightly faster than territorial emissions since 2005 in the 32 countries we identify as experiencing absolute decoupling. Figure 2, below, shows the change in consumption emissions (teal) and GDP (red) between 2005 and 2019. There is a pretty wide variation in the extent to which these countries have reduced their territorial and consumption emissions since 2005. Some countries — such as the UK, Denmark, Finland, and Singapore – have seen territorial emissions fall faster than consumption emissions, while the US, Japan, Germany, and Spain (among others) have seen consumption emissions fall faster. Figure 3 shows reductions in consumption and territorial emissions for each country, with the size of the dot representing the size of the population in 2019. Absolute decoupling is possible. There is no physical law requiring economic growth — and broader increases in human wellbeing — to necessarily be linked to CO2 emissions. All of the services that we rely on today that emit fossil fuels — electricity, transportation, heating, food — can in principle be replaced by near-zero carbon alternatives, though these are more mature in some sectors (electricity, transportation, buildings) than in others (industrial processes, agriculture).

#### Growth increases stability and disincentivizes conflict and expansionism---decline causes war.

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There are a number of factors that could lead to discontinuous changes in this metric. For example, a global economic downturn could lead to sharp reductions in development aid that could threaten any improvements in governance that had been made with the benefit of that assistance. Alternatively, a major jump in global energy costs could induce widespread fiscal crises similar to those of the 1970s and 1980s, ultimately leading to reduced state capacity. The branch scenario in red projects essentially no improvements in state capacity over the period in question, so larger changes would entail the rapid erosion of the capacity of states that are already relatively capable. Such changes are certainly possible, but they would constitute an example of nonlinear disruptive change. On balance, our projection is that state capacity is likely to continue to improve, which will tend to exert a downward pressure on the likelihood of intrastate conflict. Prevalence of Consolidated Democracies Consolidated democracies are less likely to fight one another and to be involved in internal conflict. While this correlation is clear, the mechanism by which democracies reduce conflict is more contested. The literature on interstate conflict has focused on the greater transparency and consistency of democratic regimes that allow them to credibly commit to peaceful solutions to disputes and the possibility that domestic norms and greater political accountability may make democratic states less likely to pursue violent conflicts.8 There are fewer arguments that the greater ability of consolidated democracies to resolve grievances within the political system leads to less intrastate conflict.9 We note, however, that partial democracies or the process of democratization itself may not be particularly peaceful and may even be associated with an increase in conflict.10 Given the importance of consolidated democracy in the literature on conflict, there is already a great deal of work in the academic literature on measurement of democracy. Several aggregate measures of democracy have been developed that include the competitiveness of elections; the state’s respect for civil, political, and minority rights; and freedoms of the press and religion. The most widely used measure of consolidated democracy, and the one we employ, comes from the Polity project. By coding a wide range of regime characteristics, such as political 8 Arend Lijphart, Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries, New Haven, Conn., and London: Yale University Press, 1984; Peter Liberman, Does Conquest Pay? The Exploitation of Occupied Industrial Societies, Princeton, N.J.: Princeton University Press, 1996; Charles Lipson, Reliable Partners: How Democracies Have Made a Separate Peace, Princeton, N.J.: Princeton University Press, 2003. 9 Håvard Hegre, Tanja Ellingsen, Scott Gates, and Nils Petter Gleditsch, “Toward a Democratic Civil Peace? Democracy, Political Change, and Civil War, 1816–1992,” American Political Science Review, Vol. 95, No. 1, March 2001, pp. 33–48; Christian Davenport, State Repression and the Domestic Democratic Peace, New York, N.Y.: Cambridge University Press, 2007. 10 Hegre et al., 2001; Lars-Erik Cederman, Kristian Skrede Gleditsch, and Simon Hug, “Elections and Ethnic Civil War,” Comparative Political Studies, Vol. 46, No. 3, 2012, pp. 387–417. 49 competition and constraints on the executive, an aggregate “Polity score” is produced, ranging from –10 to 10. Values of 6 or higher are typically used to identify the presence of a democracy, with a more conservative measurement of 8 or higher often used to identify consolidated democracies. We use this metric to calculate the percentage of all states that are consolidated democracies, with the historical values denoted by the black line in Figure 3.2. Figure 3.2. Prevalence of Consolidated Democracies SOURCE: Historical data: Monty G. Marshall and Keith Jaggers, Polity IV Data Set [Computer file; version p4v2012], College Park, Md.: Center for International Development and Conflict Management, University of Maryland, 2002; projections calculated by authors. We projected the baseline scenario by fitting a trend line to the historical data and calculating the future values.11 This projection is represented in the figure by the gray line. We calculated the two branch scenarios as one standard deviation above and below the baseline projection; they are shown in the figure by the blue and red lines, respectively. Discontinuous growth in the prevalence of democracies could result from various tippingpoint effects. If a high percentage of the world’s population were governed through democracy, other forms of government may come to be seen as illegitimate, and greater international pressure may be brought to bear to remove them. Within the time frame of our study, a dramatic reversal in the prevalence of consolidated democracies appears to be less likely. The reversion of 11 The trend line was fit using a generalized linear model linked to a binomial logit function. The resulting projections are therefore bounded between 0 and 1 (in this case, 0 and 100 percent). The model used in Figure 3.2 has a Pearson statistic (1/df) of .0037, suggesting a high degree of fit with the data. 50 consolidated democracies to autocracies historically has been extremely rare and is unlikely in the absence of extreme economic decline, the conquest of democracies by more powerful autocracies, or both. Either of these potential paths is likely to lead directly to increases in future conflict levels as well. Degree of Ethnic and Sectarian Polarization The academic literature generally agrees that a high level of ethnic and sectarian polarization is not sufficient by itself to cause conflict either within or between states. However, there is also agreement that in the intrastate context, where group mobilization occurs along ethnic lines, identity can become a significant contributing factor for violence, especially when strengthened by socioeconomic and sociopolitical grievances. Consequently, we identified the degree of ethnic and sectarian polarization as one of the primary factors likely to affect the level of intrastate conflict in the future. Evidence also shows that while ethnicity may not lead to conflict by itself, it may work to prolong conflicts and increase the intensity of violence in those conflicts that are already occurring.12 Such effects will most likely be strengthened if ethnic groups are deliberately disadvantaged by the state or if they are territorially based and have secessionist or separatist demands.13 Scholars tend to agree that ethnic and sectarian polarization, while a strong predictor for increased levels of intrastate conflict, is not a strong driver for conflicts between states. However, if regional and international actors become involved in intrastate conflicts, or if conflicts spread across borders, such polarization could also affect levels of interstate conflict. Such a scenario is especially likely where ethnic kin-groups in neighboring states become involved with secessionist movements.14 Quantifying ethnic and sectarian polarization is inherently difficult. While various measures have been tried, such as linguistic differences (e.g., ethno-linguistic fractionalization) or religious preferences, they are often criticized for not capturing the cleavage that gives rise to political mobilization. For example, different ethnic groups may share the same religion, and one ethnic group may speak multiple languages. It can also be difficult to determine when certain identities in a society are increasing in salience, and when they are becoming less relevant. One prominent 12 Rajat Ganguly and Raymond Taras, Understanding Ethnic Conflict: The International Dimension, Longman Publishers, 2002; Fearon and Laitin, 2003; and Daniel Bar-Tal, “Sociopsychological Foundations of Intractable Conflicts,” American Behavioral Scientist, Vol. 50, No. 11, 2007. 13 Gurr, 1970; Stephen M. Saideman, and William R. Ayres, “Determining the Causes of Irredentism: Logit Analyses of Minorities at Risk Data from the 1980s and 1990s,” Journal of Politics, Vol. 62, No. 4, November 2000, pp. 1126–1144; Monica Duffy Toft, The Geography of Ethnic Violence: Identity, Interests, and the Indivisibility of Territory, Princeton, N.J.: Princeton University Press, 2003. 14 John A. Vasquez, and Brendan Valeriano, “Territory as a Source of Conflict and a Road to Peace,” in Jacob Bercovitch, Viktor Kremenyuk, and I. William Zartman, eds., The Sage Handbook of Conflict Resolution, Los Angeles, Calif.: SAGE, 2009, pp. 193–209. 51 attempt to quantify relevant ethnic identities is the Minorities at Risk data set at the University of Maryland, which identifies minority groups by their “at risk” status—that is, by the extent to which they are disadvantaged in their relationships with other groups in the state in which they reside. However, the Minorities at Risk data identify such “at risk” groups somewhat subjectively, and the project does not claim to be comprehensive. An alternative, objective measure is to look for the degree of formal discrimination against ethnic, religious, or linguistic groups. The creation or removal of official laws providing for formal discrimination can help to identify states where identity-based grievances may become more or less salient. For capturing the degree of ethnic and sectarian polarization, therefore, we looked at the percentage of states with formal discrimination against minorities, where such minority groups make up at least 5 percent of the state’s population. We used the Ethnic Power Relations data set (EPR), which tracks the extent of access to state power for all politically relevant ethnic groups in every country of the world from 1946 to 2013. It includes annual data on more than 733 groups and codes the degree to which their representatives held executive-level state power—from total control of the government to being formally barred from holding political office. While the disadvantage of such a proxy may be that it potentially fails to capture some of the unofficial social discrimination that can lead to group mobilization, the advantage is that it allows for a more objective measure of sectarian tension. The overall levels of ethnic or sectarian polarization in the figure below may therefore be understated, but we can have more confidence in the general trend line than we could with more subjective data sources. We projected the baseline scenario by fitting an exponential trend line to the available historical data and calculating the future values.15 The projection is shown by a gray line in Figure 3.3. We calculated the two branch scenarios as one standard deviation above and below the baseline projection; they are shown by a red and blue line, respectively. 15 The exponential trend line fit to the data has the equation: y = 0.3098e-0.012x. The trend line has a high degree of fit with the data, with an R² of 0.85. 52 Figure 3.3. Percentage of States with Discriminated Minorities SOURCE: Historical data: Andreas Wimmer, Lars-Erik Cederman, and Brian Min, “Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data set,” American Sociological Review, Vol. 74, No. 2, 2009, pp. 316–337; projections calculated by authors. Discontinuous change in this variable may occur as a result of several factors. Historically, ethnic and sectarian factors often have increased in relevance after the breakup of larger states and empires, including the breakup of the Soviet Union in the early 1990s, or the end of colonialism in the 1960s. The breakup of other large, multiethnic states in the future could result in a similar outcome. Extremely high levels of resource stress because of population pressures also could prompt increased ethnically based conflict within states. Ethnic and sectarian polarization and grievances are latent in many societies, and may become politically important in order to mobilize groups to violence under conditions of severe resource or economic privation. Rate of Economic Growth Economic growth affects the prevalence of conflict in several ways. While territorial expansion traditionally has been a major cause of interstate war, states with higher levels of economic development may be less motivated to pursue such expansion because of the lower relative value of land inputs in an industrialized economy. Moreover, their reliance on international capital markets may increase the potential costs of disruptions from serious 53 international crises.16 At the intrastate level, economic growth (if broadly shared) reduces grievances, bolsters the capacity of the state to handle security challenges, and increases the population’s opportunities for licit employment, thus raising the opportunity costs of participating in rebellions or insurgencies.17 Growth benefits that accrue along ethnic or sectarian lines, however, might increase the potential for intrastate conflict, as discussed in the previous section, and sharp declines in the rate of economic growth could be associated with an increased risk of internal conflict as well.18 Therefore, there are at least two different concepts that any operationalization of this factor should attempt to capture: the overall level of economic development and changes in the rate of economic growth. Over the short term, wealthy countries tend to remain wealthy and poor countries tend to remain poor, and their degree of wealth may have a strong effect on their overall likelihood of being involved in conflict. In addition, sharp declines in the rate of growth for a range of states may increase their likelihood of intrastate conflict in particular.

#### Capitalist thought and markets are good and sustainable — tech progress has dematerialized economic growth

McAfee 19, \*Andrew Paul McAfee, a principal research scientist at MIT, is cofounder and codirector of the MIT Initiative on the Digital Economy at the MIT Sloan School of Management; (2019, “More from Less: The Surprising Story of How We Learned to Prosper Using Fewer Resources and What Happens Next”, https://b-ok.cc/book/5327561/8acdbe)

Capitalism and technological progress are the first pair of forces driving dematerialization. This statement will come as a surprise to many, and for good reason. After all, it’s exactly this combination that caused us to massively increase our resource consumption throughout the Industrial Era. As we saw in chapter 3, the ideas of William Jevons and Alfred Marshall point to the distressing conclusion that capitalism and tech progress always lead to more from more: more economic growth, but also more resource consumption.

So what changed? How are capitalism and tech progress now get ting us more from less ? To get answers to these important questions, let’s start by looking at a few recent examples of dematerialization.

Fertile Farms

America has long been an agricultural juggernaut. In 1982, after more than a decade of steady expansion due in part to rising grain prices, total cropland in the country stood at approximately 380 million acres. Over the next ten years, however, almost all of this increase was reversed. So much acreage was abandoned by farmers and given back to nature that cropland in 1992 was almost back to where it had been almost twenty-five years before. This decline had several causes, including falling grain prices, a severe recession, over-indebted farmers, and increased international competition.

A final factor, though, was the ability to get ever-more corn, wheat, soybeans, and other crops from the same acre of land, pound of fertilizer and pesticide, and gallon of water. The material productivity of agriculture in the United States has improved dramatically in recent decades, as we saw in chapter 5. Between 1982 and 2015 over 45 million acres—an amount of cropland equal in size to the state of Washington—was returned to nature. Over the same time potassium, phosphate, and nitrogen (the three main fertilizers) all saw declines in absolute use. Meanwhile, the total tonnage of crops produced in the country increased by more than 35 percent.

As impressive as this is, it’s dwarfed by the productivity improvements of American dairy cows. In 1950 we got 117 billion pounds of milk from 22 million cows. In 2015 we got 209 billion pounds from just 9 million animals. The average milk cow’s productivity thus improved by over 330 percent during that time.

Thin Cans

Tin cans are actually made of steel coated with a thin layer of tin to improve corrosion resistance. They’ve been used since the nineteenth century to store food. Starting in the 1930s, they began also to be used to hold beer and soft drinks.

In 1959 Coors pioneered beer cans made of aluminum, which is much lighter and more corrosion resistant than steel. Royal Crown Cola followed suit for soda five years later. As Vaclav Smil relates, “A decade later steel cans were on the way out, and none of them have been used for beer since 1994 and for soft drinks since 1996.… At 85 g the first aluminum cans were surprisingly heavy; by 1972 the weight of a two-piece can dropped to just below 21 g, by 1988 it was less than 16 g, a decade later it averaged 13.6 g, and by 2011 it was reduced to 12.75 g.”

Manufacturers accomplished these reductions by making aluminum cans’ walls thinner, and by making the sides and bottom from a single sheet of metal so that only one comparatively heavy seam was needed (to join the top to the rest of the can). Smil points out that if all beverage cans used in 2010 weighed what they did in 1980, they would have required an extra 580,000 tons of aluminum. And aluminum cans kept getting lighter. In 2012 Ball packaging introduced into the European market a 330 ml can that held 7.5 percent less than the US standard, yet at 9.5 g weighed 25 percent less.

Gone Gizmos

In 2014 Steve Cichon, a “writer, historian, and retired radio newsman in Buffalo, NY,” paid $3 for a large stack of front sections of the Buffalo News newspaper from the early months of 1991. On the back page of the Saturday, February 16, issue was an ad from the electronics retailer Radio Shack. Cichon noticed something striking about the ad: “There are 15 electronic gimzo type items on this page.… 13 of the 15 you now always have in your pocket.”

The “gizmo type items” that had vanished into the iPhone Cichon kept in his pocket included a calculator, camcorder, clock radio, mobile telephone, and tape recorder. While the ad didn’t include a compass, camera, barometer, altimeter, accelerometer, or GPS device, these, too, have vanished into the iPhone and other smartphones, as have countless atlases and compact discs.

The success of the iPhone was almost totally unanticipated. A November 2007 cover story in Forbes magazine touted that the Finnish mobile phone maker Nokia had over a billion customers around the world and asked, “Can anyone catch the cell phone king?”

Yes. Apple sold more than a billion iPhones within a decade of its June 2007 launch and became the most valuable publicly traded company in history. Nokia, meanwhile, sold its mobile phone business to Microsoft in 2013 for $7.2 billion to get “more combined muscle to truly break through with consumers,” as the Finnish company’s CEO Stephen Elop said at the time of the deal.

It didn’t work. Microsoft sold what remained of Nokia’s mobile phone business and brand to a subsidiary of the Taiwanese electronics manufacturer Foxconn for $350 million in May of 2016. Radio Shack filed for bankruptcy in 2015, and again in 2017.

From Peak Oil to… Peak Oil

In 2007 US coal consumption reached a new high of 1,128 million short tons, over 90 percent of which was burned to generate electricity. Total coal use had increased by more than 35 percent since 1990, and the US Energy Information Administration (the official energy statisticians of the US government) forecast further growth of up to 65 percent by 2030.

Also in 2007 the US Government Accountability Office (GAO), a federal agency known as “the congressional watchdog,” published a report with an admirably explanatory title: “Crude Oil: Uncertainty about Future Oil Supply Makes It Important to Develop a Strategy for Addressing a Peak and Decline in Oil Production.” It took seriously the idea of “peak oil,” a phrase coined in 1956 by M. King Hubbert, a geologist working for Shell Oil. As originally conceived, peak oil referred to the maximum amount of oil that we could annually produce for all of humanity’s needs.

The first oil wells pumped out the crude oil that was closest to the earth’s surface or otherwise easiest to access. As those wells dried up, we had to drill deeper ones, both on land and at sea. As the world’s economies kept growing, so did total demand for oil, which kept getting harder and harder to obtain. Peak oil captured the idea that despite our best efforts and ample incentive, we would come to a time after which we would only be able to extract less and less oil year after year from the earth. Most of the estimates summarized in the GAO report found that peak oil would occur no later than 2040.

The report did not mention fracking, which in retrospect looks like a serious omission. Fracking is short for “hydraulic fracturing” and is a means of obtaining oil and natural gas from rock formations lying deep underground. It uses a high-pressure fluid to cause fractures in the rock, through which oil and gas can flow and be extracted.

The United States and other countries have long been known to have huge reserves of hydrocarbons in deep rock formations, which are often called shales. Companies had been experimenting with fracking to get at them since the middle of the twentieth century, but had made little progress. In 2000 fracking accounted for just 2 percent of US oil production.

That figure began to increase quickly right around the time of the GAO report. Not because of any single breakthrough, but instead because the suite of tools and techniques needed for profitable fracking had all improved enough. A gusher of shale oil and gas ensued.

Thanks to fracking, US crude oil production almost doubled between 2007 and 2017, when it approached the benchmark of 10 million barrels per day. By September of 2018 America had surpassed Saudi Arabia to become the world’s largest producer of oil. American natural gas production, which had been essentially flat since the mid-1970s, jumped by nearly 43 percent between 2007 and 2017.

As a result of the fracking boom the United States has experienced peak coal rather than peak oil. And the peak in coal is not in total annual supply, but instead in demand. Fracking made natural gas cheap enough that it became preferred over coal for much electricity generation. By 2017 total US coal consumption was down 36 percent from its 2007 high point.

The phrase peak oil is still around, but, as is the case with coal, it usually no longer refers to supply. As a 2017 Bloomberg headline put it, “Remember Peak Oil? Demand May Top Out Before Supply Does.” Even though the extra supply from fracking has helped push down oil and gas prices, many observers now believe that energy from other sources—the sun, wind, and the nuclei of uranium atoms—is getting cheaper faster and becoming much more widely available. So much so that, as a 2018 article in Fortune about the future of oil hypothesized, “This wouldn’t be just another oil-price cycle, a familiar roller coaster in which every down is followed by an up. It would be the start of a decades-long decline of the Oil Age itself—an uncharted world in which… oil prices might be ‘lower forever.’ ” Analysts at Shell, the company from which the phrase peak oil originated, now estimate that global peak oil demand might come as soon as 2028.

Taking Stock of Rolling Stock

My friend Bo Cutter started his career in 1968 working for Northwest Industries, a conglomerate that owned the Chicago and North Western Railway. One of his first assignments was to help a team tasked with solving a problem that sounds odd to modern ears: figuring out where CNW’s railcars were.

These cars are massive metal assemblies, each weighing thirty tons or more. In the late 1960s CNW owned thousands of them, representing a huge commitment of both material and money. Across the railroad industry, the rule of thumb then was that about 5 percent of a company’s railcars moved on any given day. This was not because the other 95 percent needed to rest. It was because their owners didn’t know where they were.

CNW owned thousands of miles of track in places as far from Chicago as North Dakota and Wyoming. Its rolling stock (as locomotives and railcars are called) could also travel outside the company’s network on tracks owned by other railroads. So these assets could be almost anywhere in the country.

When the railcars weren’t moving, they sat in freight yards. At the time Cutter started his job, freight yards didn’t keep up-to-date records of the idle rolling stock they contained because, in the days before widespread digital computers, sensors, and networks, there was no way to cost-effectively know or communicate the location of each car. So it was impossible for CNW or any other railroad to systematically track its most important inventory, even though doing so would be hugely beneficial to the company’s bottom line. For example, Cutter’s team knew that if they could increase the percentage of cars moving each day from 5 percent to 10 percent, they would need only half as many of them. Even a single percentage point increase in freight-car use would yield major financial benefits.

When Cutter started his assignment, CNW and all other railroads employed spotters, who visited yards and watched trains pass, then telegraphed their findings to the head office. Other railroads passed on similar information to collect the demurrage charges they were owed for each CNW car on their tracks and in their yards. Cutter’s team improved on these methods by making them more systematic and efficient. They put in place a better baseline audit of where railcars were, employed more spotters, painted CNW cars differently so they were easier to see, and explored how to make more use of a new tool for businesses: the digital computer.

That tool and its kin are now pervasive in the railroad industry. In the early 1990s, for example, companies started putting radio-frequency identification tags on each piece of rolling stock. These tags would be read by trackside sensors, thus automating the work of spotting. At present over 5 million messages about railcar status and location are generated and sent throughout the American railway system every day, and the country’s more than 450 railroads have nearly real-time visibility over all their rolling stock.

The Rare Earth Scare

In September of 2010 the Japanese government took into custody the captain of a Chinese fishing boat that had collided with Japanese patrol vessels near a group of uninhabited islands in the East China Sea claimed by both countries. China responded by imposing an embargo on shipments of rare earth elements (REE) to the Land of the Rising Sun.

Even though Japan relented almost immediately and released the captain, a global panic began. This is because rare earths are “vitamins of chemistry,” as USGS scientist Daniel Cordier puts it. “They help everything perform better, and they have their own unique characteristics, particularly in terms of magnetism, temperature resistance, and resistance to corrosion.”

By 2010 China produced well over 90 percent of the world’s REE. Its actions in the wake of the maritime incident convinced many that it could and would take unilateral action to control the flow of these important materials, and panicked buying soon followed (along with its close cousin rampant speculation). A bundle of REE that would have sold for less than $10,000 in early 2010 soared to more than $42,000 by April of 2011. In September of that year the US House of Representatives held a hearing called “China’s Monopoly on Rare Earths: Implications for US Foreign and Security Policy.”

China didn’t attain its near monopoly because it possessed anything close to 90 percent of global reserves of REE. In fact, rare earths aren’t rare at all (one, cerium, is about as common in the earth’s crust as copper). However, they’re difficult to extract from ore. Obtaining them requires a great deal of acid and generates tons of salt and crushed rock as by-products. Most other countries didn’t want to bear the environmental burden of this heavy processing and so left the market to China.

In the wake of the embargo, this seemed like a bad idea. As Representative Brad Sherman put it during the congressional hearing, “Chinese control over rare earth elements gives them one more argument as to why we should kowtow to China.” But there was never much kowtowing. By the time of the hearing, prices for REE were already in free fall.

Why? What happened to the apparently tight Chinese stranglehold over REE? Several factors caused it to ease, including the availability of other supply sources and incomplete maintenance of the embargo. But as public affairs professor Eugene Gholz noted in a 2014 report on the “crisis,” many users of REE simply innovated their way out of the problem. “Companies such as Hitachi Metals [and its subsidiary in North Carolina] that make rare earth magnets found ways to make equivalent magnets using smaller amounts of rare earths in the alloys.… Meanwhile, some users remembered that they did not need the high performance of specialized rare earth magnets; they were merely using them because, at least until the 2010 episode, they were relatively inexpensive and convenient.”

Overall, the companies using REE found many inexpensive and convenient alternatives. By the end of 2017 the same bundle of rare earths that had been trading above $42,000 in 2011 was available for about $1,000.

What’s Going On?

There is no shortage of examples of dematerialization. I chose the ones in this chapter because they illustrate a set of fundamental principles at the intersection of business, economics, innovation, and our impact on our planet. They are:

We do want more all the time, but not more resources. Alfred Marshall was right, but William Jevons was wrong. Our wants and desires keep growing, evidently without end, and therefore so do our economies. But our use of the earth’s resources does not. We do want more beverage options, but we don’t want to keep using more aluminum in drink cans. We want to communicate and compute and listen to music, but we don’t want an arsenal of gadgets; we’re happy with a single smartphone. As our population increases, we want more food, but we don’t have any desire to consume more fertilizer or use more land for crops.

Jevons was correct at the time he wrote that total British demand for coal was increasing even though steam engines were becoming much more efficient. He was right, in other words, that the price elasticity of demand for coal-supplied power was greater than one in the 1860s. But he was wrong to conclude that this would be permanent. Elasticities of demand can change over time for several reasons, the most fundamental of which is technological change. Coal provides a clear example of this. When fracking made natural gas much cheaper, total demand for coal in the United States went down even though its price decreased.

With the help of innovation and new technologies, economic growth in America and other rich countries—growth in all of the wants and needs that we spend money on—has become decoupled from resource consumption. This is a recent development and a profound one.

Materials cost money that companies locked in competition would rather not spend. The root of Jevons’s mistake is simple and boring: resources cost money. He realized this, of course. What he didn’t sufficiently realize was how strong the incentive is for a company in a contested market to reduce its spending on resources (or anything else) and so eke out a bit more profit. After all, a penny saved is a penny earned.

Monopolists can just pass costs on to their customers, but companies with a lot of competitors can’t. So American farmers who battle with each other (and increasingly with tough rivals in other countries) are eager to cut their spending on land, water, and fertilizer. Beer and soda companies want to minimize their aluminum purchases. Producers of magnets and high-tech gear run away from REE as soon as prices start to spike. In the United States, the 1980 Staggers Act removed government subsidies for freight-hauling railroads, forcing them into competition and cost cutting and making them all the more eager to not have expensive railcars sit idle. Again and again, we see that competition spurs dematerialization.

There are multiple paths to dematerialization. As profit-hungry companies seek to use fewer resources, they can go down four main paths. First, they can simply find ways to use less of a given material. This is what happened as beverage companies and the companies that supply them with cans teamed up to use less aluminum. It’s also the story with American farmers, who keep getting bigger harvests while using less land, water, and fertilizer. Magnet makers found ways to use fewer rare earth metals when it looked as if China might cut off their supply.

Second, it often becomes possible to substitute one resource for another. Total US coal consumption started to decrease after 2007 because fracking made natural gas more attractive to electricity generators. If nuclear power becomes more popular in the United States (a topic we’ll take up in chapter 15), we could use both less coal and less gas and generate our electricity from a small amount of material indeed. A kilogram of uranium-235 fuel contains approximately 2–3 million times as much energy as the same mass of coal or oil. According to one estimate, the total amount of energy that humans consume each year could be supplied by just seven thousand tons of uranium fuel.

Third, companies can use fewer molecules overall by making better use of the materials they already own. Improving CNW’s railcar utilization from 5 percent to 10 percent would mean that the company could cut its stock of these thirty-ton behemoths in half. Companies that own expensive physical assets tend to be fanatics about getting as much use as possible out of them, for clear and compelling financial reasons. For example, the world’s commercial airlines have improved their load factors—essentially the percentage of seats occupied on flights—from 56 percent in 1971 to more than 81 percent in 2018.

Finally, some materials get replaced by nothing at all. When a telephone, camcorder, and tape recorder are separate devices, three total microphones are needed. When they all collapse into a smartphone, only one microphone is necessary. That smartphone also uses no audiotapes, videotapes, compact discs, or camera film. The iPhone and its descendants are among the world champions of dematerialization. They use vastly less metal, plastic, glass, and silicon than did the devices they have replaced and don’t need media such as paper, discs, tape, or film.

If we use more renewable energy, we’ll be replacing coal, gas, oil, and uranium with photons from the sun (solar power) and the movement of air (wind power) and water (hydroelectric power) on the earth. All three of these types of power are also among dematerialization’s champions, since they use up essentially no resources once they’re up and running.

I call these four paths to dematerialization slim, swap, optimize, and evaporate. They’re not mutually exclusive. Companies can and do pursue all four at the same time, and all four are going on all the time in ways both obvious and subtle.

Innovation is hard to foresee. Neither the fracking revolution nor the world-changing impact of the iPhone’s introduction were well understood in advance. Both continued to be underestimated even after they occurred. The iPhone was introduced in June of 2007, with no shortage of fanfare from Apple and Steve Jobs. Yet several months later the cover of Forbes was still asking if anyone could catch Nokia.

Innovation is not steady and predictable like the orbit of the Moon or the accumulation of interest on a certificate of deposit. It’s instead inherently jumpy, uneven, and random. It’s also combinatorial, as Erik Brynjolfsson and I discussed in our book The Second Machine Age. Most new technologies and other innovations, we argued, are combinations or recombinations of preexisting elements.

The iPhone was “just” a cellular telephone plus a bunch of sensors plus a touch screen plus an operating system and population of programs, or apps. All these elements had been around for a while before 2007. It took the vision of Steve Jobs to see what they could become when combined. Fracking was the combination of multiple abilities: to “see” where hydrocarbons were to be found in rock formations deep underground; to pump down pressurized liquid to fracture the rock; to pump up the oil and gas once they were released by the fracturing; and so on. Again, none of these was new. Their effective combination was what changed the world’s energy situation.

Erik and I described the set of innovations and technologies available at any time as building blocks that ingenious people could combine and recombine into useful new configurations. These new configurations then serve as more blocks that later innovators can use. Combinatorial innovation is exciting because it’s unpredictable. It’s not easy to foresee when or where powerful new combinations are going to appear, or who’s going to come up with them. But as the number of both building blocks and innovators increases, we should have confidence that more breakthroughs such as fracking and smartphones are ahead. Innovation is highly decentralized and largely uncoordinated, occurring as the result of interactions among complex and interlocking social, technological, and economic systems. So it’s going to keep surprising us.

As the Second Machine Age progresses, dematerialization accelerates. Erik and I coined the phrase Second Machine Age to draw a contrast with the Industrial Era, which as we’ve seen transformed the planet by allowing us to overcome the limitations of muscle power. Our current time of great progress with all things related to computing is allowing us to overcome the limitations of our mental power and is transformative in a different way: it’s allowing us to reverse the Industrial Era’s bad habit of taking more and more from the earth every year.

Computer-aided design tools help engineers at packaging companies design generations of aluminum cans that keep getting lighter. Fracking took off in part because oil and gas exploration companies learned how to build accurate computer models of the rock formations that lay deep underground—models that predicted where hydrocarbons were to be found.

Smartphones took the place of many separate pieces of gear. Because they serve as GPS devices, they’ve also led us to print out many fewer maps and so contributed to our current trend of using less paper. It’s easy to look at generations of computer paper, from 1960s punch cards to the eleven-by-seventeen-inch fanfold paper of the 1980s, and conclude that the Second Machine Age has caused us to chop down ever more trees. The year of peak paper consumption in the United States, however, was 1990. As our devices have become more capable and interconnected, always on and always with us, we’ve sharply turned away from paper. Humanity as a whole probably hit peak paper in 2013.

As these examples indicate, computers and their kin help us with all four paths to dematerialization. Hardware, software, and networks let us slim, swap, optimize, and evaporate. I contend that they’re the best tools we’ve ever invented for letting us tread more lightly on our planet.

All of these principles are about the combination of technological progress and capitalism, which are the first of the two pairs of forces causing dematerialization.

## Innovation

### Impacts

#### Grey goo is a myth from the 1980s

Zeeburg 09(Amos, Editor of Discover Magazine, “Codex Futurius: Why Gray Goo Is a Great Dud” 5/18/09 http://blogs.discovermagazine.com/sciencenotfiction/2009/05/18/codex-futurius-why-gray-goo-is-a-great-dud/#.UTBHeut0y4Y)kyan

Plagues of nanorobots, under the name of “gray goo,” were first considered in detail by the Nanotechnology Study Group at MIT in the 1980s. Their concern was that these would be mechanical bacteria. Of course, the whole Earth is covered with biological bacteria, just as small, with machinery just as molecular, as anything nanotechnology could ever make. So why was anyone worrying about a few more mechanical ones? The main worry was that the mechanical version might be more efficient and thus more dangerous. A car can go 10 times as fast as a horse. Perhaps a mechanical bacterium could be faster, tougher, or more efficient than a biological one. On further analysis, it turned out that the situation wasn’t that simple. Horses eat hay and grain and leaves and other naturally occurring energy sources, while cars need highly refined and expensive fuel. One reason cars are more efficient is that their “digestion” is outsourced to refineries. Similarly, cars outsource their healing to repair shops and their reproduction to factories. They need roads and other infrastructure to be built for them. Any sensibly designed nanorobot would work the same way, for the same reason: It’s much more efficient. But that leaves the nanorobot, like the car, completely unable to go foraging in the wild and form a “plague.” Imagine trying to build a car that ran on hay which it harvested itself, graded its own roads, made its own parts with which it repaired itself, and built new cars. **Plagues of nanorobots are about as likely as plagues of hay-eating cars**. And in the unlikely eventuality someone ever actually did build them, such nanorobots wouldn’t be much more efficient than bacteria, and could be controlled easily by efficient, faster, more powerful, fuel-using, non-reproducing nanomachines.

#### No AI extinction

Dr. Oren Etzioni 16, Professor of Computer Science at the University of Washington, CEO of the Allen Institute for Artificial Intelligence, Ph.D. from Carnegie Mellon University and BA from Harvard University, “It’s Time to Intelligently Discuss Artificial Intelligence”, Medium, 12-9, https://medium.com/backchannel/ai-wont-exterminate-us-it-will-empower-us-5b7224735bf3

Tesla CEO Elon Musk worries it is “potentially more dangerous than nukes.” Physicist Stephen Hawking warns, “AI could be a big danger in the not-too-distant future.” Fear mongering about AI has also hit the box office in recent films such as Her and Transcendence.

So as an active researcher in the field for over 20 years, and now the CEO of the Allen Institute for Artificial Intelligence, why am I not afraid?

The popular dystopian vision of AI is wrong for one simple reason: it equates intelligence with autonomy. That is, it assumes a smart computer will create its own goals, and have its own will, and will use its faster processing abilities and deep databases to beat humans at their own game. It assumes that with intelligence comes free will, but I believe those two things are entirely different.

To say that AI will start doing what it wants for its own purposes is like saying a calculator will start making its own calculations. A calculator is a tool for humans to do math more quickly and accurately than they could ever do by hand; similarly AI computers are tools for us to perform tasks too difficult or expensive for us to do on our own, such as analyzing large data sets, or keeping up to date on medical research. Like calculators, AI tools require human input and human directions.

Now, autonomous computer programs exist and some are scary — such as viruses or cyber-weapons. But they are not intelligent. And most intelligent software is highly specialized; the program that can beat humans in narrow tasks, such as playing Jeopardy, has zero autonomy. IBM’s Watson is not champing at the bit to take on Wheel of Fortune next. Moreover, AI software is not conscious. As the philosopher John Searle put it, “Watson doesn't know it won Jeopardy!”

Anti-AI sentiment is often couched in hypothetical terms, as in Hawking’s recent comment that “The development of full artificial intelligence could spell the end of the human race.” The problem with hypothetical statements is that they ignore reality—the emergence of “full artificial intelligence” over the next twenty-five years is far less likely than an asteroid striking the earth and annihilating us.

#### Meteorology checks the bioterror impact

\*meteorology solves – reject their hyped rhetorical posturing; best studies flow negative – it is chemically impossible for bioterror attacks to be successful – they need to be dispersed in low-altitude aerosol clouds where they do not settle properly – 90 percent of the microorganisms die during that process due to sunlight, smog, humidity and temperature changes – at best a few dozen deaths would be expected

\*lack of a sophisticated delivery system makes dispersal impossible – environmental changes nullify the impact

**Mueller 10** – John, Woody Hayes Chair of National Security Studies at the Mershon Center for International Security Studies and a Professor of Political Science at The Ohio State University, A.B. from the University of Chicago, M.A. and Ph.D. @ UCLA, Atomic Obsession – Nuclear Alarmism from Hiroshima to Al-Qaeda, Oxford University Press]

Properly developed and deployed, biological weapons could potentially, if thus far only in theory, kill hundreds of thousands, perhaps even millions, of people. The discussion remains **theoretical** because biological weapons have **scarcely** ever been used. For the most destructive results, they need to be dispersed in very **low-altitude aerosol clouds**. Since aerosols do not appreciably settle, pathogens like anthrax (which is not easy to spread or catch and is not contagious) would probably have to be sprayed near nose level. Moreover, **90 percent** of the microorganisms are likely to die during the process of aerosolization, while their effectiveness could be reduced still further by **sunlight, smog, humidity, and temperature changes**. Explosive methods of dispersion may destroy the organisms, and, except for anthrax spores, long-term storage of lethal organisms in bombs or warheads is difficult: even if refrigerated, most of the organisms have a limited lifetime. Such weapons can take days or weeks to have full effect, during which time they can be countered with medical and civil defense measures. In the summary judgment of two careful analysts, delivering microbes and toxins over a wide area in the form most suitable for inflicting mass casualties-as an aerosol that could be inhaled-requires a delivery system of **enormous sophistication**, and even then effective dispersal could **easily be disrupted** by unfavorable environmental and meteorological conditions.

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#### States win---nullification

Gardner 19 — Trevor G Gardner, Associate Professor of Law at Washington University, former Faculty Fellow at New York University Law School, holds a Ph.D. in Sociology from the University of California, holds a J.D. from Harvard Law School, 2019 (“Right at Home: Modeling Sub-Federal Resistance as Criminal Justice Reform,” *Florida State University Law Review*, Volume 46, Issue 527, Available Online at <https://heinonline.org/HOL/LandingPage?handle=hein.journals/flsulr46&div=20&id=&page=>, Accessed 07-18-2020, p. 548-550)

Nullification occurs as a consequence of the manpower disparity between the federal government and local governments. The federal government cannot broadly enforce most of its criminal initiatives absent cooperation from state and local police. While the federal government employs 105,000 law enforcement agents across its various public security agencies, 7 4 state and local governments collectively employ 1.2 million. 75 The reach of a federal criminal initiative within a sub-federal jurisdiction often depends on the extent to which the associated subfederal government allows its police officers to participate in the initiative's enforcement.

If sub-federal governments broadly decline to assist in the enforcement of federal immigration law, enforcement abstinence may translate to enforcement nullification. For example, of the estimated 11 million unauthorized immigrants residing in the United States, 2.67 million (24 percent) live in California, and of California's unauthorized immigrant population, about 814,000 (30 percent) live in Los Angeles County.76

In 2013, the state of California passed the Trust Act, which barred state and local police from honoring federal immigration detainers for criminal suspects unless the requested detainee had been convicted of (rather than merely arrested for) a "serious or violent felony."77 The Act does permit California police to lawfully grant federal detainer requests in a limited number of circumstances, but cooperation is not required.78 Far from it. If occurring outside of the narrow range of discretion allowed under the Act, police cooperation with federal government officials constitutes a misdemeanor criminal offense. 79

Why is the California Trust Act a major problem for the Department of Homeland Security? In short, DHS cannot effectively enforce federal immigration law in Los Angeles County without the support municipal police.

The immigration enforcement policy clash in Los Angeles County indicates the federal government's implementation challenges across the country. DHS Secretary Jeh Johnson addressed the issue in a memorandum in 2014, announcing the termination of "Secure Communities"-one of a succession of cooperative immigration enforcement programs.8 0 The letter addresses the impact of sub-federal government opposition on the viability of the program:

The goal of Secure Communities was to more effectively identify and facilitate the removal of criminal aliens in the custody of state and local law enforcement agencies. But the reality is the program has attracted a great deal of criticism, is widely misunderstood, and is embroiled in litigation; its very name has become a symbol for general hostility toward the enforcement of our immigration laws. Governors, mayors, and state and local law enforcement officials around the country have increasingly refused to cooperate with the program, and many have issued executive orders or signed laws prohibiting such cooperation.8 1

Johnson's letter captures the difficulties federal public-security officials face in enforcement-abstinence jurisdictions. Today, however, DHS officials lobby the nation's largest cities in an attempt to persuade them to drop rigid abstinence policies and refer unauthorized immigrants suspected of terrorism or convicted of gang-related crime or of aggravated felonies under the Immigration and Nationality Act. 82 Several jurisdictions, such as New York City, Philadelphia, Los Angeles, and Cook County, have resisted compliance with these requests favoring near-absolute abstinence from the enforcement of federal immigration law.83

In a hearing before the House Judiciary Committee in July of 2015, Secretary Johnson was asked to explain why his agency opted to terminate the Secure Communities program. Johnson testified that in the past year alone, state and local police had ignored 12,000 federal immigrant-detention requests. 8 4 In response, the Department decided to scrap Secure Communities and market its replacement, the Priority Enforcement Program (PEP), as a tempered alternative. Under PEP, DHS officials would limit immigrant detainer requests to arrests for serious criminal offenses.85 The federal government's modest objectives under PEP indicate the degree to which federal officials need subfederal police. When state and local governments refuse to consent to cooperative enforcement, enforcement nullification is, in many instances, a likely outcome.

#### No legislative preemption---federalism ensures political and procedural safeguards.

Blue = AT: Agency Preemption

HLR 20 (Harvard Law Review, June 10, 2020, “Antitrust Federalism, Preemption, and Judge-Made Law,” 133 *Harv. L. Rev*. 2557-2578, Note, June 10th, https://harvardlawreview.org/wp-content/uploads/2020/05/2557-2578\_Online.pdf)

To be clear, the problem with preemption based on a regulatory regime created through congressional delegation to the judiciary is not that that delegation is unconstitutional. Some scholars do argue that the judicial creation of federal antitrust common law breaches the Constitution’s separation of powers.98 The Supreme Court, however, has not been persuaded by this argument. After all, the Sherman Act still reigns supreme after over a century of fleshing out by the federal judiciary.99

As a policy matter, however, the undemocratic nature of the federal judiciary makes preemption by federal judge-made law more troubling than legislative preemption. In most instances of preemption, state interests are protected through process federalism. Process federalism protects the states from federal encroachment through political and procedural safeguards.100 The states’ political safeguard is that state representatives pervade the federal system: “States are represented in Congress; states participate in the election of the President through the Electoral College;” and, in a cooperative-federalist manner, “state officials may . . . participate in the administration of federal programs.”101 The hope is that the states’ defenders in Washington will prevent the degradation of state interests.102 The states’ procedural safeguards add to their political safeguard: “Even if members of Congress have the will to encroach upon or displace state prerogatives, . . . the legislative gauntlet makes it difficult for Congress to do so.”103 Any attempt at preemption would require that legislation survive bicameralism, presentment, and Congress’s internal rules.104

It is true that, in order to expressly preempt state antitrust law in favor of federal judge-made antitrust law, Congress would first have to overcome process federalism’s dual safeguards. There is reason to believe that the safeguards have worked so far. Even in the face of influential detractors like Judge Posner, Congress has only expanded the states’ antitrust role.109 However, whereas purely legislative preemption would require Congress to pass through the safeguards every time it decided to meddle with state antitrust policies, preemption by judgemade law would require Congress to overcome the safeguards only once. After express preemption passed through, the courts could go about frequently changing federal antitrust law without political or procedural checks, and states would have little recourse.

While these process federalism concerns also apply to federal agency delegation, the concerns are greater in the face of judicial delegation. Agency delegation avoids process federalism’s political safeguards because “[a]gencies are not beholden to states in any politically thick sense.”110 It avoids procedural safeguards because an agency “bypasses the legislative dam.”111 But the executive branch is more democratic than is the judiciary. In the antitrust context, DOJ enforcement policy shifts when a new President takes over.112 States also have more influence on agencies than they do on the judiciary. Federal regulatory regimes often involve state implementation that can “generate dynamics of mutual dependency that may make federal agencies receptive to state interests,”113 a type of relationship that has been labeled “cooperative federalism.”114 States can also affect agency policy by challenging it, a type of federalism known as “uncooperative federalism.”115 Although process federalism’s safeguards are weakened when Congress delegates to agencies, that weakening is at least softened by the above factors — factors that do not help redeem judicial delegation.

#### Empirics---state antitrust action has long been accepted and precedes federal action---the Supreme Court unanimously ruled that states have authority to impose liability beyond federal law---that’s First

#### Overwhelming fiscal and political power forces Congressional acquiescence.

Heather Gerken 17, J. Skelly Wright Professor of Law at Yale Law School, JD from the University of Michigan Law School, AB from Princeton University, “We’re About To See States’ Rights Used Defensively Against Trump”, Vox, 1/20/2017, https://www.vox.com/the-big-idea/2016/12/12/13915990/federalism-trump-progressive-uncooperative

Progressives have long been skeptical of federalism, with the role that “states’ rights” played in the resistance to the civil rights act and desegregation typically featuring prominently in their criticism. Its ugly history even led one 20th-century scholar to insist that “if one disapproves of racism, one should disapprove of federalism.” Even now, with every national institution in the hands of the GOP, progressives associate federalism with conservatism and shy away from invoking the language of federalism to change the policies they oppose.

That is a mistake. Federalism doesn’t have a political valence. These days it’s an extraordinarily powerful weapon in politics for the left and the right, and it doesn’t have to be your father’s (or grandfather’s) federalism. It can be a source of progressive resistance — against President’s Trump’s policies, for example — and, far more importantly, a source for compromise and change between the left and the right. It’s time liberals took notice.

Here are three important ways progressives can take a chapter from the conservatives’ playbook and use their control over state and local governments to influence the national agenda, shape policy results, and encourage political compromise. If Jerry Brown or Andrew Cuomo or Eric Garcetti is looking for a “to do” list for the next four years, it’s here.

Uncooperative federalism

People assume that if Congress changes a law, everything changes on a dime. They forget that Congress depends heavily on states and localities to implement federal policy.

The federal government doesn’t have enough resources to deal with immigration, enforce its own drug laws, carry out its environmental policies, build its own infrastructure, or administer its health care system. Instead, it relies on the states to do much of this work. We call such arrangements between the states and federal government “cooperative federalism.” But we forget that they create many opportunities for what Jessica Bulman-Pozen and I have called “uncooperative federalism.”

Progressives at the state and local level can influence policy simply by refusing to partner with the federal government. By doing so, they force issues onto the national agenda, foregrounding debates that the Republicans would rather avoid. More importantly, defeating state or local opposition costs fiscal resources and political capital the federal government would rather employ elsewhere.

The GOP-controlled federal government can’t put cops on every beat or bureaucrats at every desk; it needs state and local officials to get its agenda through. If blue states and cities refuse to implement Trump’s agenda, Republicans will sometimes be forced to compromise rather than pay a political and fiscal price.

## Innovation

#### Consensus of scientists agree no grey goo

**Jones ’07** (Richard A. L. Jones, polymer physicist at the University of Sheffield, in England, 2007, Soft machines: nanotechnology and life, p. 218, <http://books.google.com/books?id=YskMtiF7qr0C&pg=PA5&dq=%22grey+goo%22&ei=JcaISOX9G5egiwGM46TJBA&sig=ACfU3U2i5gqPrQQTFf2XuIH1V0e3cmYoog#PPP1,M1>)

What has been the scientists' reaction to the growing fears of grey goo? There has been sonic fear and anger. I think: many scientists watched the controversy about genetic modification with dismay, as in their eyes a hugely valuable, as well as fascinating, technology was hobbled by inaccurate and irresponsible reporting. But mostly the reaction is blank incomprehension. At least genetic modification was actually a viable technology at the time of the controversy, **while for a self-replicating nano-machine there is still a very long way to go from the page of the visionary to the laboratory or factory**'. To a scientist, struggling maybe to get a single molecule lo slick where it is wanted on a surface, **the idea of a self-replicating nano-robot is so far-fetched as to be " laughable**. How have we got to this state, where we have a backlash to a technology that has not yet arrived? In this, maybe scientists are not entirely without blame. **Most scientists working in nanotechnology themselves may refrain from making extreme claims about what the science is going to deliver, but (with some notable exceptions) they have not been very quick to lower expectations**. One does not have to be very cynical to link this to the very favourable climate for funding that nanoscale science and technology has been enjoying recently.

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#### Infrastructure checks US ag collapse – it’s existential

Axne, 9-23 – Cindy Axne is U.S. Representative from Iowa’s Third Congressional District, serves on the U.S. House Committees on Agriculture and Financial Services, the Rural Broadband Task Force, and is the Midwest Regional Whip for the House Democratic Caucus. “Why I’ve fought for biofuels through Congress’ infrastructure debate,” <https://www.agri-pulse.com/articles/16527-opinion-why-ive-fought-for-biofuels-through-congress-infrastructure-debate> -- Iowa

Over the past few months, my colleagues and I in Congress have engaged in discussions about the kinds of investments we can make at the federal level to support our local economies and meet the challenges facing our country in the coming decades. One provision that I’ve successfully worked to include in the legislation is a $1 billion investment in a homegrown energy solution that supports thousands of rural American jobs and help us meet our carbon emissions goals: biofuels. By investing in biofuels infrastructure, the Build Back Better Act will not only directly support rural America’s economic success but also tackle the threat of climate change head-on; two goals that have been at the top of my agenda since coming to Congress in 2019. But this funding was by no means a guarantee, and early on I took on the fight to see it included because it was clear to me that biofuels was not as much of a priority for folks who don’t keep rural America in mind in Washington. I represent more than a dozen rural counties across central and southwest Iowa, just one of a few Democrats whose district sent a Democrat to Congress while voting for Republicans at the ‘top of the ticket.’ And I’m in the House on their behalf because I’ve made it clear to them that I’m willing to work as hard as 10 Representatives, and that I will not be shouted down by the folks on the coasts or in oil-rich states that have more folks in Congress. I’ve raised my voice when Iowa was devastated by flooding and other natural disasters, and when my own party wanted to give our farmers the short end of the stick in government funding agreements. And now, I’ve turned my commitment to the rural communities I represent into a push for these renewable fuel investments. Starting this spring, I made it my mission to help members of the Biden Administration, the Senate, and my own colleagues in the House understand the key advantages of biofuels – from the fact that it’s been proven to be more than twice as clean as fossil fuels to how much it can help our farmers and the biodiesel and ethanol producers here in Iowa. I sat down with members from the coasts who’ve never seen an ear of corn still on its stalk, let alone visited a renewable fuel plant, to explain how effective these fuels can be at lowering emissions quickly, how sustainable the production of these fuels has become, and how much cleaner these products really are. To curb the effects of the climate crisis, I told them, we need to drastically reduce our reliance on fossil fuels quickly. And to do that, we can’t just rely on energy technologies that are still years away from being widely available. Biofuels needs to be part of the climate solution – now. And from where the bill stands now, it’s clear that my colleagues listened. Over the past few weeks, portions of the Build Back Better Act have been approved at the committee level with numerous provisions that I fought for that will support renewable fuels and biofuels for years to come. We approved $1 billion in funding for the U.S. Department of Agriculture to provide grants over the next 8 years to expand biofuel pump infrastructure, upgrade existing tanks and pumps, and increase usage of higher blends of ethanol and biodiesel. That funding alone is projected to not only help us reduce carbon emissions, but also put an extra $400 million in the pockets of Iowa farmers through higher demand for our corn alone. We also passed an extension of the biodiesel tax credit, another key priority of mine that I’ve fought for since coming to Congress in 2019. Biodiesel, while supporting 13 percent of the value of bushels of soybeans, is nearly 75% cleaner than diesel and has reduced over 140 million tons of carbon in the last decade. And we’re also looking at additional tax credits that will support the conversion of renewable fuels in other parts of our transportation sector, like aviation fuel, and how we can ensure that agriculture producers can be a part of that new market. With infrastructure investments and tax incentives like these, we can quickly expand the availability of this low carbon fuel across the U.S. And when it comes to supporting jobs in our rural areas and economic prosperity for communities across the Midwest and beyond, the innovation and growth of our renewable fuels sector will create an incredible return on this investment from the Build Back Better Act. That’s the message I took to my colleagues, and that’s why I wouldn’t let up. And while I know this work is not over until these investments are signed into law, and there are plenty of other priorities that will need to be ironed out before we reach that point, I’m as committed as ever to getting these important provisions across the finish line. The future of rural America, our farmers, and our planet all depend on it

**U.S. ag collapse drives war**

**Castellaw 17** (John – 36-year veteran of the U.S. Marine Corps and the Founder and CEO of Farmspace Systems LLC, “Opinion: Food Security Strategy Is Essential to Our National Security,” 5/1/17, https://www.agri-pulse.com/articles/9203-opinion-food-security-strategy-is-essential-to-our-national-security)

The United States faces many threats to our National Security. These threats include continuing wars with extremist elements such as ISIS and potential wars with rogue state North Korea or regional nuclear power Iran. The heated economic and diplomatic competition with Russia and a surging China could spiral out of control. Concurrently, we face threats to our future security posed by growing civil strife, famine, and refugee and migration challenges which create incubators for extremist and anti-American government factions. Our response cannot be one dimensional but instead must be a nuanced and comprehensive National Security Strategy combining all elements of National Power including a Food Security Strategy. An American Food Security Strategy is an imperative factor in reducing the multiple threats impacting our National wellbeing. Recent history has shown that reliable food supplies and stable prices produce more stable and secure countries. Conversely, food insecurity, particularly in poorer countries, can lead to instability, unrest, and violence. Food insecurity drives mass migration around the world from the Middle East, to Africa, to Southeast Asia, destabilizing neighboring populations, generating conflicts, and threatening our own security by disrupting our economic, military, and diplomatic relationships. Food system shocks from extreme food-price volatility can be correlated with protests and riots. Food price related protests toppled governments in Haiti and Madagascar in 2007 and 2008. In 2010 and in 2011, food prices and grievances related to food policy were one of the major drivers of the Arab Spring uprisings. Repeatedly, history has taught us that a strong agricultural sector is an unquestionable requirement for inclusive and sustainable growth, broad-based development progress, and long-term stability. The impact can be remarkable and far reaching. Rising income, in addition to reducing the opportunities for an upsurge in extremism, leads to changes in diet, producing demand for more diverse and nutritious foods provided, in many cases, from American farmers and ranchers. Emerging markets currently purchase 20 percent of U.S. agriculture exports and that figure is expected to grow as populations boom. Moving early to ensure stability in strategically significant regions requires long term planning and a disciplined, thoughtful strategy. To combat current threats and work to prevent future ones, our national leadership must employ the entire spectrum of our power including diplomatic, economic, and cultural elements. The best means to prevent future chaos and the resulting instability is positive engagement addressing the causes of instability before it occurs. This is not rocket science. We know where the instability is most likely to occur. The world population will grow by 2.5 billion people by 2050. Unfortunately, this massive population boom is projected to occur primarily in the most fragile and food insecure countries. This alarming math is not just about total numbers. Projections show that the greatest increase is in the age groups most vulnerable to extremism. There are currently 200 million people in Africa between the ages of 15 and 24, with that number expected to double in the next 30 years. Already, 60% of the unemployed in Africa are young people. Too often these situations deteriorate into shooting wars requiring the deployment of our military forces. We should be continually mindful that the price we pay for committing military forces is measured in our most precious national resource, the blood of those who serve. For those who live in rural America, this has a disproportionate impact. Fully 40% of those who serve in our military come from the farms, ranches, and non-urban communities that make up only 16% of our population. Actions taken now to increase agricultural sector jobs can provide economic opportunity and stability for those unemployed youths while helping to feed people. A recent report by the Chicago Council on Global Affairs identifies agriculture development as the core essential for providing greater food security, economic growth, and population well-being. Our active support for food security, including agriculture development, has helped stabilize key regions over the past 60 years. A robust food security strategy, as a part of our overall security strategy, can mitigate the growth of terrorism, build important relationships, and support continued American economic and agricultural prosperity while materially contributing to our Nation’s and the world’s security.

#### Climate-focused infrastructure funding will pass now

Collinson 10-29-2021, analyst @ CNN (Stephen, “Democrats fight one another in Washington as Americans struggle,” *CNN*, <https://www.cnn.com/2021/10/29/politics/congress-spending-bill-president-joe-biden-italy-g20-democrats/index.html>)

Changing millions of lives

There is no doubt that if it passes, the social spending package, which makes housing, education, health care and home care more affordable, has the potential to change millions of lives. The climate proposals could unleash a new green economy as well as help save the planet. And Biden will probably eventually get his Washington victory lap. His domestic policy chief Susan Rice told CNN's Anderson Cooper Thursday the White House was "very confident" a framework accepted by House progressives would be the basis of the spending bill that would now be able to pass both chambers. The two holdout moderate Democrats, Joe Manchin of West Virginia and Kyrsten Sinema of Arizona, are yet to publicly and unreservedly endorse the framework. The question now, after another missed deadline, is when the situation will change. In the last few days, the spectacle of Democrats ditching multi-billion dollar programs and hurriedly trying to come up with new ways to fund the bill has left an impression of chaos that hardly enhances the reputation of one of the biggest social spending bills in generations. The longer the impasse lingers, the greater the risk that moderate Senate Democrats will get cold feet. Or that progressives will sour on a framework for a deal that cuts out many of their favorite programs, including paid family leave and free community college. Biden's departure for the G20 summit in Italy and the UN climate conference in Scotland was set by Democratic leaders as the latest deadline to pass the infrastructure and spending bills. On Thursday, it also became the latest must-pass date to be missed, reflecting a growing habit for the White House to set deadlines that are not met and frazzle the President's credibility. As a result of the latest miss, Biden showed up in Rome looking like a President who cannot get his own house in order before he meets world leaders to reaffirm US leadership. Biden had particularly wanted climate programs in the spending bill sent to his desk before he left, to pressure other nations to make significant cuts to carbon emissions at the climate summit. Progressives believe that the social spending bill, which offers universal pre-school, home health care for the sick and the elderly and $500 billion in spending to combat climate change, is a once-in-a-generation chance to overhaul the economy to alleviate the burden on working Americans.

#### Saves the Glasgow conference and prevents extinction

Andrew McCormick 9/23, independent journalist and former CJR Delacorte Fellow, wrote in the New York Times, The Atlantic, the South China Morning Post, and more, “Congress’s climate bill is a major story. Journalists are missing the most important part.,” Columbia Journalism Review, 9-23-2021, https://www.cjr.org/covering\_climate\_now/congress-reconciliation-bill-cop26-climate.php

IN NOVEMBER, world leaders will meet in Glasgow, Scotland, for a summit that will go a long way toward determining whether humanity preserves a liveable planet. At COP26, the follow-up to the 2015 climate summit that gave us the Paris Agreement, countries are expected to revisit and update plans to limit global heating to 1.5 degrees Celsius, which scientists say is necessary to avoid the worst consequences of climate change. Together, leaders will either agree to dramatically reduce fossil fuel use, or they will fail, further exposing humanity to the rising tide of climate destruction.

Given the monumental importance of COP26, it’s not unreasonable to imagine journalists covering the runup to the summit as they would the runup to a major election: reporters everywhere pressing leaders on their diplomatic preparations; commentators trading predictions on nightly news programs; newsrooms retooling their entire staffs to support wall-to-wall coverage. None of that is happening, and that’s a problem. But this article is about a different omission by the press.

Whether or not COP26 ends in success depends in large part on whether the United States’ delegation arrives in Glasgow with a credible plan. As the world’s largest historical emitter of greenhouse gases, the US is reasonably expected to enact its share of transformational climate action. America is also the world’s largest economy; with other large economies, including China and India, still reliant on fossil fuels to drive growth, the world is unlikely to strengthen emissions-reduction targets to the levels necessary unless the US is in a position to cajole, compel, and barter with its peers, as nations must at meetings like this.

That, in turn, depends almost entirely on whether the US Congress passes effective climate legislation.

Enter Democrats’ omnibus budget reconciliation plan. The measure, which bears a provisional price tag of $3.5 trillion, is the promised complement to the $1.2 trillion bipartisan infrastructure bill passed in August by the Senate, now pending House approval. The $3.5 trillion plan is also the largest climate-change bill in US history, and it comes not a moment too soon.

​​American politics don’t exist in a vacuum, of course. The reconciliation bill, a current fixture of our political news cycle, is not just a story about partisan gamesmanship or the intransigence of a certain West Virginia senator. It’s a story about all of humanity’s survival and prosperity in the face of catastrophe. Passed, the bill will enable Americans to put their best foot forward at COP26. Delayed, watered down, or scuttled altogether, it will instead bind their feet.

Joe Biden knows this. As the president said Tuesday in his speech at the United Nations General Assembly, “To keep within our reach the vital goal of limiting global warming to 1.5 degrees Celsius, every nation needs to bring their highest-possible ambitions to the table when we meet in Glasgow for COP26.”

And yet the importance of the reconciliation bill vis-a-vis COP26 is all but absent from the news. In many stories about the bill, in fact, the word “climate” does not appear at all. Perhaps reporters or editors imagine the summit doesn’t interest their audiences. But that undervalues COP26: At a time when scientists agree time is short for humanity to pull back from the brink, it’s no exaggeration to say the meeting’s outcomes concern every living person on Planet Earth.

To be fair, Democrats’ and the Biden administration’s messaging about the reconciliation bill has not been laser focused. Is it an infrastructure bill? A jobs bill? The Build Back Better plan? On Pod Save America, show hosts who are former staffers of the Obama administration have observed that shifting talking points have likely hindered Democrats in selling the plan to the American public, confusing all but the most insulated politics junkies.

Perhaps journalists can’t be faulted for failing to explain the implications of this plan, then. But isn’t it our job to rise above the fray? Inconsistent messaging by the administration and the Center for Disease Control on Covid-19, for example, has prompted fierce criticism from journalists, who rightly push leaders to get their stories straight as a matter of public interest. If we don’t similarly hold politicians’ feet to the fire on the reconciliation bill, and connect the dots between it and COP26’s outcomes, our audiences will fail to grasp the enormity of what’s at stake. And without that popular awareness, there can’t be the public pressure necessary to make leaders get the job done.

There are some journalists getting this right. An August piece in the environmental publication E&E News, for example, ran under the headline “U.S. global climate promises hang on reconciliation battle.” And, in an article previewing the UN General Assembly, The Washington Post drew a clear line between the $3.5 trillion package and America’s global commitments as they relate to COP26.

But most coverage has predictably focused instead on intra-party squabbles—specifically between centrist senators Joe Manchin, of West Virginia, and Kyrsten Sinema, of Arizona, and the majority of the Democratic party. Republicans, who unanimously oppose the reconciliation bill and regularly traffic in climate denial and disinformation, have been given a relative pass. And, of course, no shortage of coverage has attempted to divine the bearings of these proceedings on the 2022 and 2024 elections.

Last Sunday, on NBC’s “Meet the Press,” Manchin, who earns hundreds of thousands of dollars annually from fossil-fuel stocks, said there was no rush or deadline to pass the reconciliation measure. Host Chuck Todd declined to challenge Manchin on this point. Instead, he asked the senator what the bill would look like if he were to write it from scratch.

But there is a deadline: A world-historic summit less than six weeks from now which COP26 president Alok Sharma, of the United Kingdom, has called humanity’s “last best chance” to tackle the climate emergency.

The reconciliation bill will affect many aspects of Americans’ lives, yes. But that is foremost because the threat of climate change necessitates a rethinking of how humanity conducts its business on this earth: A strong climate bill is also a strong infrastructure bill, with funding to rebuild roads and lift communities out of poverty. The bill is also a contract with the world, a statement that, after four years of going backwards under the Trump administration, the US is able and willing to act on climate.

The stronger the reconciliation bill, the better the chances are of success at COP26. And, as record-setting wildfires, droughts, floods, and hurricanes have demonstrated so vividly this year, humanity cannot afford failure. To the extent that Congress’s bill squares with climate science and reckons with the legacy of the fossil fuel industry, or else throws Big Oil an eleventh-hour lifeline, America will be judged.

#### Failure of the infrastructure package locks in catastrophic climate change---extinction

Paul Bledsoe 9/4, strategic adviser at the Progressive Policy Institute and a professorial lecturer at American University’s Center for Environmental Policy. He served on the White House Climate Change Task Force under former President Bill Clinton, “Climate devastation is upon us. Congress must act.,” NY Daily News, 9-4-2021, https://www.nydailynews.com/opinion/ny-oped-climate-congress-20210904-mqbe75qni5b77ocke5orzrmjce-story.html?outputType=amp

Many Democrats publicly expressed the need to act on climate change, and offered legislation at the federal and state level. Yet while the ability of Democrats to pass needed legislation was hindered by some divisions within their own ranks, resistance came primarily from Republicans who overwhelmingly opposed any serious actions to limit climate change and the greenhouse gas emissions that cause it. With a few prominent exceptions like former Sen. John McCain, most Republicans derided climate concerns as alarmism and claimed any attempts to limit emissions would be devastating to the U.S. economy.

Fast forward 20 years, and our climate situation has grown immeasurably more grave. As predicted climate change impacts are inflicting huge human and economic costs in the U.S., with much worse to come without immediate action. Yet stunningly, our broken politics on climate change seem much the same as decades before.

Democrats, beginning with President Biden, are desperately pushing to enact hundreds of billions of dollars in climate change and clean energy measures later this month as part of a wider economic and budget bill. These actions can cut U.S. emissions by 50% below 2005 levels by the end of the decade, and put the U.S. in a stronger position to force other nations to act in key climate negotiations in November.

But right now Republicans are unified in opposition to any but cursory climate actions. John Barrasso of Wyoming, the top Republican on the Senate Energy Committee, claimed the Biden climate measure was a “spree to impose this green new disaster on every American,” willfully ignoring the real climate disasters all around us that Biden’s legislation will help limit. This summer, every single Republican member of the key Senate Finance Committee voted against tax incentives for solar, wind, geothermal, electric vehicles and dozens of other clean energy sources.

The stakes of the climate crisis are far more profound and long-lasting than most leaders seem to recognize. What’s needed is a united, bipartisan front like that the U.S. created during the Cold War, in part to force other key nations like China to cut their emissions as aggressively as we do. An inkling that this may be possible is found in bipartisan support for recent legislation promoting American technology innovation to compete globally, and significant bipartisan support for infrastructure legislation.

But slow action to cut emissions won’t work. We must act decisively and quickly now in Congress this fall to create a clean energy future and cut emissions that are destabilizing our climate. Otherwise, we are consigning ourselves and all of those who come after us to a devastated and denuded world.

#### Infrastructure checks warming – CCS, renewables, and several others

* Zero carbon emissions in the power sector by 2035
* Renewables (solar, wind)
* Clean tech (government fleet conversion)
* Efficiency (4mn top class building upgrades by 2025)
* CCS

Glueck and Friedman, 20 (Katie Glueck is a national politics reporter at The New York Times. Lisa Friedman is a reporter on the climate desk at The New York Times, focusing on climate and environmental policy in Washington. July 14, “Biden Announces $2 Trillion Climate Plan,” https://www.nytimes.com/2020/07/14/us/politics/biden-climate-plan.html) iowa js

[Joseph R. Biden Jr.](https://www.nytimes.com/interactive/2020/us/elections/joe-biden.html) announced on Tuesday a new plan to spend $2 trillion over four years to significantly escalate the use of clean energy in the transportation, electricity and building sectors, part of a suite of sweeping proposals designed to create economic opportunities and strengthen infrastructure while also tackling climate change. In a speech in Wilmington, Del., Mr. Biden built on his plans, [released last week](https://www.nytimes.com/2020/07/09/us/politics/biden-buy-american.html), for reviving the economy in the wake of the coronavirus crisis, with a new focus on enhancing the nation’s infrastructure and emphasizing the importance of significantly cutting fossil fuel emissions. As he denounced [President Trump](https://www.nytimes.com/interactive/2020/us/elections/donald-trump.html)’s stewardship of the virus and climate change, he drew criticism from Republicans — but he also faced a key test from progressives who have long been skeptical of the scope of his climate ambitions. “These are the most critical investments we can make for the long-term health and vitality of both the American economy and the physical health and safety of the American people,” he said. “When Donald Trump thinks about climate change, the only word he can muster is ‘hoax.’ When I think about climate change, the word I think of is ‘jobs.’” The proposal is the second plank in Mr. Biden’s [economic recovery plan](https://www.nytimes.com/2020/07/09/us/politics/biden-buy-american.html). His team sees an opportunity to take direct aim at Mr. Trump, who has struggled to deliver on his pledges to pay for major improvements to American infrastructure. “Seems like every few weeks when he needs a distraction from the latest charges of corruption in his staff, or the conviction of high-ranking members of administration and political apparatus, the White House announces, quote, ‘It’s Infrastructure Week,’” Mr. Biden said, referring to a [long-running Washington joke](https://www.nytimes.com/2019/05/22/us/politics/trump-infrastructure-week.html). “He’s never delivered. Never really even tried. Well, I know how to get it done.” Throughout his remarks, Mr. Biden sought to signal that he grasps the urgency of global climate challenges while also casting the issue as the next great test of American ingenuity. “I know meeting the challenge would be a once-in-a-lifetime opportunity to jolt new life into our economy, strengthen our global leadership, protect our planet for future generations,” Mr. Biden said. “If I have the honor of being elected president, we’re not just going to tinker around the edges. We’re going to make historic investments that will seize the opportunity, meet this moment in history.” Even before Mr. Biden spoke, Mr. Trump’s allies painted the plan as a costly threat to jobs in the energy sector, and his campaign sought to link the proposal to the Green New Deal, the far-reaching climate plan. Early Tuesday evening, in an appearance from the White House Rose Garden, Mr. Trump launched into a rambling attack on his opponent filled with falsehoods and baseless claims, while also seeking to paint Mr. Biden and his environmental plan as radical. Mr. Biden’s “agenda is the most extreme platform of any major party nominee, by far, in American history,” Mr. Trump said. Referring to Mr. Biden’s primary opponent, the progressive Senator Bernie Sanders, he continued, “I think it’s worse than actually Bernie’s platform.” In fact, many liberals have long been unenthusiastic at best about Mr. Biden, a former Delaware senator who staunchly opposes a range of progressives’ top priorities: He has said that he does not support “Medicare for all” or defunding the police, he has not fully endorsed the Green New Deal and has reservations about marijuana legalization. His record on issues like criminal justice has drawn fierce criticism from the left, and some in his party view his reverence for bipartisan deal-making as naïve. Still, his climate plan does appear to have made some inroads with progressive Democrats. “This is not a status quo plan,” said Gov. Jay Inslee of Washington, a prominent environmentalist who ran a [climate-focused campaign](https://www.nytimes.com/2019/08/21/us/politics/jay-inslee-2020-campaign.html) for the Democratic presidential nomination and later [endorsed Mr. Biden](https://www.nytimes.com/2020/04/22/us/politics/jay-inslee-endorses-biden.html). He added: “It is comprehensive. This is not some sort of, ‘Let me just throw a bone to those who care about climate change.’” **Mr. Inslee called** the proposal “visionary.” Mr. Biden’s plan outlines specific and aggressive targets, including achieving an emissions-free power sector by 2035 and upgrading four million buildings over four years to meet the highest standards for energy efficiency. Mr. Biden’s remarks sometimes assumed a populist bent, directly challenging Mr. Trump’s efforts to woo workers in the industrial Midwest with promises of “America First” job policies. As Mr. Biden discussed converting government vehicles into electric vehicles, he promised that “the U.S. auto industry and its deep bench of suppliers will step up, expanding capacity so that the United States, not China, leads the world in clean vehicle production.” And he offered a vision for “new, clean, made-in-America vehicles” to be made more accessible to American consumers as well. He also pressed the need to link environmental advocacy to racial justice, describing pollution and other toxic harms that disproportionately affect communities of color. His plan calls for establishing an office of environmental and climate justice at the Justice Department and developing a broad set of tools to address how “environmental policy decisions of the past have failed communities of color.” Mr. Biden set a goal for disadvantaged communities to receive 40 percent of all clean energy and infrastructure benefits he was proposing. He also made explicit references to tribal communities and called for expanding broadband access to tribal lands. Elizabeth Kronk Warner, the dean of the S.J. Quinney College of Law at the University of Utah and a citizen of the Sault Ste. Marie Tribe of Chippewa Indians, said she was pleasantly surprised by Mr. Biden’s plan. “Usually environmental justice is an afterthought or it’s not clearly quantified,” she said. “As a citizen of a tribe, I very much appreciate that he explicitly references tribal communities.” In a call with reporters on Tuesday morning, senior Biden campaign officials said the proposal was the product of discussions with climate activists and experts; union officials and representatives from the private sector; and mayors and governors. Evergreen Action, an organization that advocates far-reaching climate goals and is led by a number of former Inslee staff members, also discussed ideas with Mr. Biden’s staff in recent months, the organization said. Mr. Biden’s original plan called for spending $1.7 trillion over 10 years with a goal of achieving net-zero emissions before 2050. **The new blueprint significantly** increases the amount of money and accelerates the timetable. To pay for it, campaign officials said, Mr. Biden proposes an increase in the corporate income tax rate to 28 percent from 21 percent, “asking the wealthiest Americans to pay their fair share,” and using some still-undetermined amount of stimulus money. Mr. Biden’s team said the proposal included a combination of executive actions and legislation. The legislation would require congressional cooperation. That is hardly a certainty in a partisan political environment, especially if Republicans maintain control of the Senate or retake the House of Representatives, even as polls show the G.O.P. facing major political headwinds. Representative Steve Scalise, Republican of Louisiana and the House Republican whip, suggested the plan was a boondoggle. “The only thing I can think of is that is Solyndra on steroids,” he said on a Trump campaign call, referring to the California solar company that went bankrupt and had received a $535 million loan guarantee from the Obama administration. “You would have higher energy costs and you would see who gets hit the hardest — it’s low-income families.” Mr. Biden insisted that “these aren’t pie-in-the-sky dreams,” saying, “These are actionable policies.” One major element of the announcement will include charting a path to zero carbon pollution from the U.S. electricity sector by 2035. According to the Energy Information Association, coal and natural gas still account for more than 60 percent of the sector. Campaign officials said they expected to achieve the goal by encouraging the installation of “millions of new solar panels and tens of thousands of wind turbines,” but also keeping in place existing nuclear energy plants. The plan also will call for investing in carbon capture and storage technology for natural gas. Under the plan, Mr. Biden also promises new research funding and tax incentives for carbon-capture technology. Kathleen Sgamma, the president of the Western Energy Alliance, which represents oil and gas companies, said Mr. Biden’s goals were “unrealistic” and would hurt energy producers. “We’ll focus on moderating these policies once Biden moves from appeasing the left during the campaign to potentially governing,” she said.

## Sustainability

#### Cap is sustainable, inevitable, and key to solve the environmental crisis – alternatives fail and ensure environmental collapse

-at: timeframe, thermodynamics, rebound effects

Bosch and Schmidt 19 (Stephan, Institute of Geography, Chair for Human Geography, University of Augsburg, and Matthias, Institute of Geography, Chair for Human Geography, University of Augsburg, “Is the post-fossil era necessarily post-capitalistic? – The robustness and capabilities of green capitalism”, Ecological Economics, Vol. 161, July) DB

Concerning the second dimension of criticism, Section 4 illustrates how the rejection of green capitalism overlooks promising approaches to surmounting the environmental crisis. On the one hand, we argue that in face of the given narrow time slot as well as the prevailing political strategies, it is more realistic and pragmatic to primarily assess the efficiency of market-oriented solutions. Even though in principle we take sufficiency to have the best effectiveness regarding the solution of ecological and social problems, we still do not count on people's willingness to live in greater moderation within due time. On the other hand, we therefore presume that there are no other suitable economic frame conditions for surmounting the crisis than those offered by the capitalist social order. This perspective is based on the assumption that innovations, which above all emanate from thriving economies (Wangler, 2013), are highly relevant for overcoming the environmental crisis. As growth, innovation, and the development of new industries are to be seen as directly related to the export sector as well as the utilisation of comparative advantages (Bathelt and Glückler, 2012), we therefore also strictly object to the concept of autonomy. Moreover, we take innovation and the aspects of growth, entrepreneurship, and democratic processes of negotiation related to it (cf. Gailing et al., 2013; Walter and Gutscher, 2013; Raven et al., 2016), to be essential for the implementation of regenerative energy systems and social welfare (Iversen, 2005; Nasirov et al., 2017). Our presumption that innovations occur more likely and more frequently within a capitalist, than in alternative social orders (e.g. Harris, 2013: socialist markets), is derived from Schumpeter's notion of competitive capitalism, which he distinctly sets apart from trustified capitalism. Competitive capitalism is about fertile destructive impulses emanating from enthusiastic entrepreneurs who are ready to take risks, and act solution-oriented. These impulses may revolutionise the economic process: “This process of Creative Destruction is the essential fact about capitalism” (Schumpeter, 2009). Based on Schumpeter's ‘theory of economic development’ (cf. Herzog and Honneth, 2016; Schumpeter, 1994; Schumpeter, 2009) – which, according to Marques (2008), represents the original idea of innovation-driven capitalism – we analyse capitalism's robustness to the downfall of fossil energy; moreover, we investigate its potential contributions to ecologic sustainability. Yet we want to go beyond Schumpeter's perspective, which fixes on the entrepreneur, and take a closer look at the role of state policy in Section 5. Our argument is that creative entrepreneurs and markets alone will not suffice to specifically and quickly initiate the change of the energy system driven by innovation. We state the thesis that an active role of the state is needed which relies on political continuity when it comes to promoting environmental innovation and creates stable institutional frame conditions. In a last step, we will show that during the deployment of regenerative energy systems, social aspects have hitherto been given too little attention by actors of state and politics and that national objectives were uncoupled from local contexts. To achieve a successful low-carbon transition, these deficits need to be corrected. In principle, this seems possible, as market-economically oriented regenerative energy systems have often been the result of open-minded democratic negotiations. In Section 6, the findings of the study will be summarised. 2. The crisis of fossil energies and capitalism Energy sources are a central element of humankind's materialistic history and elementary changes in the relevance of energy carriers have always led to extensive economic and societal transformations (Bridge et al., 2013). Exemplarily, the drastic increase in productivity during industrialisation cannot be explained without the revolutionary change of the energy system towards fossil fuels (Osterhammel, 2011). Ever since, economic growth is accompanied by an increasing consumption of finite energy resources and non-energetic primary materials (Altvater, 2005). Accordingly, questions of economic development must always be regarded in the context of the energy system, as well as the circulation of energetic and non-energetic crude materials within it (Meadows et al., 2004). Altvater (2007) takes the relationship between humans and nature to be crisis-laden because a limited stock of energy resources within the Earth's thin crust forms the basis of the present economic system. This limitation implied grave consequences for the global ecology. The apparently crisis-laden interrelation of nature and economy is also highlighted in ‘Anthropocene or Capitolocene?’ edited by Moore (2016), in which the impacts of capitalism are regarded as significant enough to be marked as their own geochronological era. The main point of criticism is capitalism's orientation to industrial scaling and quantitative growth (Mathews, 2011), which likely will end abruptly once Earth's limited capacities will have been depleted by the exponential growth of population and economy (Daly, 1995). Yet not only the finiteness of energy carriers, but also the accumulation of extreme meteorological incidents, mass mortality of species, and sea level rise represent impediments of stable economic growth (McCarthy, 2015). The scenarios concerning trends of the world's condition developed by the Club of Rome illustrate that keeping a high wealth level can only be accomplished if a radical change in societal attitude concerning the valuation of growth will take effect (Meadows et al., 2004). Stopping environmental destruction while maintaining the present economic system appears to be impossible, since fossil energy carriers provide globally acting companies with the opportunity to spatially separate production and consumption as well as to externalise the manifold ecological expenses (Chisholm, 1990). Bridge (2010) rates the heated debates about Peak Oil as ecologically motivated forebodings of a new energy order in which the modern industrial nations are going to free themselves of their dependence on oil. For Neomarxist groups, the end of the age of mineral oil even represents an apocalyptic turn of eras during which nature were going to take vengeance on the ecological arrogance of capitalism. According to Bettini and Karaliotas (2013), the narration of Peak Oil thereby attains a symbolism that reaches far beyond mathematical calculations of the scarcity of fossil energy sources, being extended to a general criticism of a system that is exclusively oriented on growth. McCarthy (2015) sees the chance of a post-fossil capitalism especially in the commodification of wind, sunlight, geothermal heat, and waves. This way, nature would again be introduced into the cycle of capital. Van den Bergh (2011) presumes that this may be a practicable approach, perceiving criticism of market economy and capitalism as too radical and warns of one-sidedly problematising growth without simultaneously pointing out realisable alternative ways. He therefore prefers the ‘a-growth-concept’, which assumes a neutral position on growth, trying to create social as well as ecological sustainability by means of pricing policy, environmental agreements, and education initiatives. The commodification of nature, however, is rejected by the degrowth movement, as the comparison of the Montreal Protocol, which is based on regulations (ozone) with the Kyoto Protocol based on trade had shown a greater effectiveness of regulative measures (Kallis, 2011). Concerning the market's capabilities, North (2010) additionally speaks of the neoliberal enthusiasts' mindless faith in technology, who were mistakenly convinced that creative destruction is sufficient to face the societal challenges posed by Peak Oil and the climate crisis. Sarkar and Kern (2008) limit the possibilities of the global community's further development to the two options ‘eco socialism’ or ‘barbarism’. This rhetoric stylises capitalism as the image of the enemy: on the one hand, it represents the cause of the global ecological crisis due to the exploitation of natural resources – and for that reason alone were not to be maintained (Daly, 2005) – while on the other hand not offering a suitable social framework for mastering the crisis (Kallis et al., 2009). Hence, the development of a symbiotic economy (Garcia-Olivares and Sole, 2015) rooted beyond obsessive economic growth (Buch-Hansen, 2018) is promoted. Renewable energies were apt to meet these requirements since they can be developed through collaborative bottom-up mechanisms on a communal level, therefore enabling the decentralisation and democratisation of energy supply (Rifkin, 2013). In fact, this may be an option. However, in the following, we want to demonstrate that capitalism is not only very robust to crises, but is also able to contribute to the solution of the environmental crisis. 3. Robustness of capitalism 3.1. Space-time compression We will now show that the possibility of increasing productivity does not end with the transition to a regenerative energy system, but only needs to be embedded into new logistic-infrastructural contexts. In this, we contradict Altvater (2007), Huber (2009) and North (2010), who claim that capitalism could expand only on the basis of fossil fuels, since, due to the global transportability of oil, gas, and coal, entrepreneurial actions are no longer bound to the local availability of energy resources, but range globally. Furthermore, the usage of fossil energy carriers is not subject to daily or seasonal fluctuations. Transportability and baseload capacity hence lead to space-time compression (Harvey, 1996), as products can be generated in ever shorter intervals of time. Following this logic, the limitation of the fossil resource basis inevitably brings about the end of the capitalistic system. It remains undisputed that energy flow within a solar-based energy system is hard to control (Georgescu-Roegen, 1971). Most forms of renewable energies are intermittent sources, whose contribution to the energy mix are subject to the rhythms of sun, wind, precipitation, and tides (Fares, 2015). Adapting energy production to demand, a fundamental prerequisite of continuous economic growth, thus becomes a major challenge. What Altvater (2007), Huber (2009) and North (2010) actually do not include in their considerations, are the numerous technological innovations for the stabilisation of regenerative energy systems. After all, with biomass and geothermal power, two energy carriers capable of providing base load are at hand (Matek and Gawell, 2015), which may, in the form of regenerative combined power plants, support the weather-dependent energy sources sun and wind (Palensky and Dietrich, 2011; Ramchurn et al., 2011). The numerous energy storage technologies are also important, albeit only few of these have reached industrial maturity. In principle, mechanical, chemical, electrical, or thermal kinds of storage are being discerned (Hadjipaschalis et al., 2009). Compressed air and pumped storage power plants with efficiency levels of up to 80% are especially promising (Anagnostopoulos and Papantonis, 2008). Research is also conducted on the conversion of surplus regenerative power into methane or hydrogen (Jensen et al., 2007), by which the bidirectional operation of the power and gas network is made possible, allowing for transportability as well as baseload capacity within large spatial units. Space-time availability may also be augmented by the development and capacity expansion of high-voltage transmission lines (Walter and Bosch, 2013). Harriss-White and Harriss (2007) have pointed out at an early point, that the existent grids, having been developed following a monopolistic logic, are outdated and incapable of integrating decentrally-produced electricity with strong fluctuations. These deficits, however, are successively being corrected. E.g., Germany's South, which is poor in wind but strong in terms of industry is being provided with direct access to the big wind energy off-shore potentials in the North as well as to the storage power plants in Scandinavia (cf. Fig. 1). The possibilities of intercontinental power transport from regenerative sources have been thoroughly investigated by DLR (2006) and Grossmann et al. (2014). Both energy storage and the development of the power grid thus will successively reverse the present space-time limitations of regenerative energy systems. The two domains, however, are not isolated from one another, but are coordinated via smart grids. Solomon and Krishna (2011) emphasise that smart grids are superbly suitable for the implementation of market-based approaches, so that an innovation-driven mass market for energy efficiency technologies could be anticipated. Smart grids also provide the possibility of no longer designing the mass production of renewable energy technologies on a fossil basis, but by the usage of renewable energy. While the production of the first generation of regenerative technologies was based on fossil energy, in future, the possibilities of energy storage, the almost unlimited energy potential of a solar-based economy, and the combination of both aspects through smart grids will ensure the flexible provision of regenerative energy at every production site without limits of time. Yet in order to optimise the flows of energy and material in smart grids, concepts of closed crude material cycles are needed, which, in the sense of the cradle-to-cradle approach (cf. Section 4), allow the reintroduction of used materials (e.g. old wind power plants made of renewable resources) to the biosphere. Thus, the problem of externalisation of ecological costs can be minimised. Summing up, the increase of productivity and stable economic growth within regenerative energy systems seems possible. Still, it remains to be emphasised that large-scale energy projects also entail negative social consequences. E.g., Yenneti et al. (2016) have shown that the Charanka solar park in Gujarat, India, was erected on areas that the local population's livelihood had depended on for decades. The refuse of access to these areas, as well as the inhabitants' successive dispossession through state measures thus are direct results of the Indian economy's ecological modernisation (Levien, 2013). In this context, Baka (2013) speaks of “energy dispossessions”, a phenomenon which has also been observed with large-scale wind energy parks (Avila, 2018; Cowell, 2010). The socio-material impact of economic modernisation on the local population, whose lives strongly depend on agricultural land use, are often insufficiently respected (Yenneti et al., 2016), so that the dubious impression was given that environmental protection and economic growth based on efficient technologies, competition, and state measures could go with one another without social side effects. Remarkably, the controversial energy mega-projects especially in the global South, are not the cause of the development of new power asymmetries and conflicts, but rather reproduce and harden long-standing social disparities and injustices (Avila, 2018). According to Bradley and Hedrén (2014), a low-carbon transition hence misses its aims if it is only about modernising the energy system without likewise transforming the underlying social structures. 3.2. Crisis as an element of capitalist social order We hold the view that the occurrence of crises in capitalism is not due to it being an ailing, doomed economic order; nor is it a proof of capitalism's ineptitude for meeting ecological challenges. Instead, we deem that crisis is a fundamental element of the capitalist social order that actually provides a chance for readjusting economic processes. Harvey (2011) explains that anything blocking the circulation and accumulation of capital may pose a threat to the capitalist system and induce a fundamental crisis. The finiteness of fossil fuels is a crisis of this kind (McCarthy, 2015). Altvater (2007) is convinced that capitalism will not be able to overcome this crisis; therefore, future technologic progress had to be embedded in a non-fossil, non-capitalist framework. Kallis (2011) also emphasises that the approach to a steady state (cf. Daly, 1991, Daly, 2005) will transform the institutional preconditions of property, work, banking, and distribution to such an extent that in the end, it will be impossible to still identify them as capitalistic. With regard to Kallis' doubts concerning the institutional robustness of capitalism, Schumpeter points out that precisely the ups and downs of industrial development, which are the outcomes of successful innovations' intensifying competition, enable progress (Herzog and Honneth, 2016). As crises therefore represent an immanent part of the capitalist system, an environmental and resources-related crisis caused by the capitalistic process does not provide sufficient evidence to suggest a possible downfall of the capitalistic social order. The crisis might even be taken as proof of an economic cycle, if it is regarded as a period of depression between the dwindling fossil and the emerging regenerative age. Böhm et al. (2012) and McCarthy (2015) confirm that capitalism is capable of overcoming even fundamental crises, actually using these as starting points of its further expansion. Concerning the environmental crisis, Harriss-White and Harriss (2007) also concede that the deployment of renewable energies holds the potential of founding a new form of capitalism that is characterised by a much lower degree of materialistic lavishness. Bettini and Karaliotas (2013) emphasise that from a neo-liberal point of view, the accusation of capitalism bringing about a resources-related and environmental crisis does not at all provoke self-doubts. Rather, it caused the profitable marketing of adequate approaches to solutions in the field of resource depletion and environmental impacts to move into economic focus. Even Altvater (2007) points out that the externalised effects of production and consumption on nature become relevant for companies once they jeopardise profitability and accumulation. In that case, environmental problems and their solutions can actually be made part of capitalist logic. Solomon and Krishna (2011) are convinced that in order to solve the environmental crisis, it were not even necessary to achieve further technologic breakthroughs, as the technologies needed for the remodeling of society towards energy efficiency were already mature and cost-efficient. Even if capitalism might be sufficiently robust, Kallis (2011) still takes the crisis as a chance to break up obstructive social and political lock-ins that have hitherto seemed unalterable and have lead into the crisis. Yet he does not regard the ability of social and political transformation to be inherent in the traits of market, but as a characteristic of a social order orientated towards degrowth. Certainly, Kallis is right in saying that the market is hard to control, making a concerted transformation towards sustainability difficult. Still his criticism only refers to that form of capitalism which Schumpeter characterised as trustified capitalism and which does lead to ecologically problematic lock-in effects. The criticism cannot, however, be applied to competitive capitalism, which generates those basic innovations giving rise to the revolutionary crises described as so fertile by Kallis (2011). Thus, an opportunity is provided for alternative social conditions to be brought about – but within the capitalist social order – and for substantiating these new conditions through further innovations. Innovations may emerge outside of competition and market economy, but will then lack the required frequency and force, as growth represents the most important incentive of innovation (Wangler, 2013). On the other hand, a continuous process of innovation again leads to growth, which may revolutionise the present social conditions, as Schumpeter states (Herzog and Honneth, 2016). Thereby, a new combination of the given means of production within new sites of production emerges, generating new goods, methods, and markets. Productive resources are applied to hitherto untested usages while being withdrawn from those usages they served before (Geels, 2011). What Kallis (2011) terms technological optimism with regard to the ecological innovative power of capitalism, is therefore technological realism in the context of Schumpeter's competitive capitalism. Without doubt, innovative boosts on the part of already established companies are also conceivable and may give rise to the possibility of maintaining trustified capitalism with its ecologically precarious structures. An example hereof is the innovation ‘Carbon Dioxide Capture and Storage’, by which the ecological impact of the emission intensive electrical conversion of coal is being reduced (Benson and Orr, 2008). Technological progress may hence stabilise the existent system of economy and policy that is accountable for the environmental crisis (Bettini and Karaliotas, 2013). In Schumpeter's view, however, the decisive economic order is competitive capitalism, which is characterised by the aggressive economic demeanour of new, innovative enterprises economically challenging the establishment (Herzog and Honneth, 2016). The start-ups of new companies, which are inseparably connected with the processes of innovation, withdraw production goods from the present capitalist system by underbidding, disturbing the former economic balance that is so destructive for nature. Competition is therefore essential for overcoming the environmental crisis. In that respect, the concept of ‘solidary economics’ and its precept of surmounting the allegedly ruthless principle of competition and emancipating oneself from the logic of the markets (Embshoff and Giegold, 2008), is counterproductive, as the renunciation of competition impedes the breakup of crusted economic structures, which thus continue to harm the environment. After all, the big energy providers' strategy was and is to hold on to the fossil-nuclear power plant pool for as long as possible, suppressing alternative concepts of energy supply (Gawel et al., 2012). A radical transformation of the energy system therefore cannot emerge from the existent structures, as Schumpeter assesses (Herzog and Honneth, 2016). Instead, innovative processes emerge outside of the old major companies until proceeding to attack the incumbent regime through the rededication of means of production (Geels, 2011). Innovative marketing strategies of small and middle scale businesses supplanting cumbersome large companies play an essential part especially in the field of renewable energies (Walsh, 2012). In this, competition is a decisive element that cannot easily be superseded. 4. Capabilities of green capitalism A competitive green capitalism develops great creativity by its high rate of innovation, which may also reinvent the relationship between humans and nature. We now want to exemplify how this might be brought about. Schumpeter holds the view that innovation is the result of the capitalistic entrepreneurial spirit, not the other way round (Herzog and Honneth, 2016). Technological and social progress hence are no independent variables materialising out of thin air, but arise from the logic of the capitalist process. Meadows et al. (2004) accept that innovations may relocate the limits of growth, making it possible to maintain the living standard by continuously reducing the consumption of crude materials and energy. However, one of the energy system's prevailing deficits is that depleted or not yet tapped resources are being (re-)obtained based on non-regenerative energy (Schwartzman, 2008), causing capitalistic production to be increasingly energetically inefficient (Murphy and Hall, 2011). Overcoming the energy crisis hence calls for the consideration of thermodynamic principles (Georgescu-Roegen, 1971, Georgescu-Roegen, 1986; Martinez-Alier, 1987). Harriss-White and Harriss (2007) see the deployment of renewable energies as a possibility of limiting the creation of entropy. Kaberger and Mansson (2001) have shown that innovative resources-saving material cycles may be possible and economical if they are based on the usage of the inexhaustible energy of irradiance. What is promising about this approach is that, due to research and development, the utilisation of solar energy becomes more and more efficient and lucrative (Schmid, 2016). Moreover, its inexhaustible potential allows for the exploitation of material resources even from deposits with extremely low crude material density. On a local level, the utilisation of solar energy may actually lead to a reduction of entropy (Ebeling et al., 1998; Kranert and Cord-Landwehr, 2010), as it is the case with the usage of waste heat of solar thermal power plants for the desalination of sea water (DLR, 2007). The integration of these capacities into smart grids and the associated remodeling of every production process to purely regenerative sources have been detailed in Section 3. We further argue that innovation surpasses conceivability. Even Harris (2010) sees a particularly high potential in unpredictable technological innovations to break through economic routine, thus encouraging further entrepreneurs in issuing their own innovations. Capitalism might thereby be provided with the chance to reduce its ecological exploitation. But innovation exceeds strictly technological aspects and may as well comprise social and institutional aspects (Arentsen and Bellekom, 2014). E.g., in the mobility sector, whose pollutant emissions have significantly contributed to the environmental crisis, innovations have led to new features of cargo and passenger transportation. This is illustrated by the example of car sharing as an innovative life style (Prettenthaler and Steininger, 1999) or bicycle-sharing schemes in urban areas (Midgley, 2011). Another representative case is the history of the ozone hole, which Meadows et al. (2004) describe as a history of civil success regarding the correction of a severe overshoot. Quite in the sense of Schumpeter, Meadows et al. (2004) name the ‘industry's creative heads’ as the crucial problem-solving determinant. Through the three innovative boosts ‘better insulation’, ‘reduced toxic substitute materials’, and ‘emission-free alternative substances’, it will be possible to rebuild the original density of the ozone layer by the mid-21st century. Remarkably, this is realised without abandoning the existent economic system. Furthermore, we argue that it is realistic to assume growth-oriented, competitive markets in the future, rather than socio-material conditions beyond them, which, as stated by Van den Bergh (2011) are completely uncertain as of now (e.g. Harris, 2013: socialist markets). We therefore hold the view that it is more pragmatic to design future mass markets in an eco-friendly way. Kallis (2011) rejects the possibility that the wonder of a dematerialised economy might occur, as improvements of efficiency were overcompensated by growing consumption. While dematerialisation may be tantamount to a wonder, researchers still do put effort into adjusting the materialised economy to ecological compatibility. One aspect is the thorough redefinition of nature protection, because nowadays, nature protection is reduced to the attempt of limiting the harmfulness of processes and products (Mulhall and Braungart, 2010). However, due to the potential creation of new mass markets for more eco-friendly and efficient processes or products, this strategy holds the danger of actually augmenting unwanted effects through rebound effects. In this regard, Alcott (2005) points to the Jevon's Paradox which says it is a great error to think that technologic innovations were going to reduce the consumption of resources. Polimeni et al. (2015) name the example of the Green Revolution: the remarkable increase of food production's area efficiency was not at all able to abate the problems of hunger and area consumption, as consequently, the population greatly increased. Likewise, a mass market of efficient and eco-friendly products would again lead to a massive amount of poison and waste, with disposed crude materials hardly being recycled. The ecological costs then would have to be externalised, which Sturm and Vogt (2011) regard as strong evidence of the failure of the market. The core problem hence lies in the fact that products are being produced exclusively for the technosphere (McDonough and Braungart, 2013). E.g., copper is almost universally applicable to and beneficial for technological systems, while in biological systems, this material is extremely poisonous. Thus, the aim must be to design products in a way that makes them equally usable in biosphere, i.e. subsequent to their technical usage. This calls for the development of a combined management of nutrients for techno- and biosphere. Human ways of living, the processes and products they are based on, may thereby be employed for the benefit of nature. The focus must therefore be put on those innovations that break up the present paradigm of environmental protection by realising products that create a useful material connection between techno- and biosphere. An example of this kind of creative destruction is the Austrian company Gugler, the first print shop worldwide that produces printing products free from harmful ingredients and exclusively with substances that can be biologically recycled (Gugler GmbH, 2018). E.g., the accruing sludge is returned to biosphere and the ash of burned printing products can be reused as a fertilizer. These conditions provide the possibility of designing economic activities to be ecologically compatible despite a high resource throughput.

#### This isn’t significant in finances

Jason Fernando 21, (“Correlation Coefficient” https://www.investopedia.com/terms/c/correlationcoefficient.asp)

The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables. The values range between -1.0 and 1.0. A calculated number greater than 1.0 or less than -1.0 means that there was an error in the correlation measurement. A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no linear relationship between the movement of the two variables. Correlation statistics can be used in finance and investing. For example, a correlation coefficient could be calculated to determine the level of correlation between the price of crude oil and the stock price of an oil-producing company, such as Exxon Mobil Corporation. Since oil companies earn greater profits as oil prices rise, the correlation between the two variables is highly positive. KEY TAKEAWAYS Correlation coefficients are used to measure the strength of the relationship between two variables. Pearson correlation is the one most commonly used in statistics. This measures the strength and direction of a linear relationship between two variables. Values always range between -1 (strong negative relationship) and +1 (strong positive relationship). Values at or close to zero imply a weak or no linear relationship. Correlation coefficient values less than +0.8 or greater than -0.8 are not considered significant.

And even if it is – that’s reasons why specific practices are bad – hency why we have sen a decline in profits past 150 years not no profits ever