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#### ‘Scope’ is the extent of the area covered by the core laws

Oxford 22 – Oxford English Dictionary, ‘scope’, https://www.lexico.com/en/definition/scope

1 The extent of the area or subject matter that something deals with or to which it is relevant.

*‘we widened the scope of our investigation’*

#### It’s bounded by exemptions and immunities

Layne E. Kruse 19, Co-Chair, Melissa H. Maxman, Co-Chair, Vittorio Cottafavi, Vice Chair, Stephen M. Medlock, Vice Chair; David Shaw, Vice Chair; Travis Wheeler, Vice Chair; Lisa Peterson, Young Lawyer Representative; all on the Exemptions and Immunities Committee of the ABA Antitrust Section, “Long Range Plan, 2018-19,” American Bar Association, 3/18/2019, https://www.americanbar.org/content/dam/aba/administrative/antitrust\_law/lrps/2019/exemptions-immunities.pdf

D. Top 3 Accomplishments Since Last Long Range Plan in 2015

(1) Publications. In addition to our Annual ALD Updates, we are set to publish an update to the Noerr-Pennington Handbook, which should be out in 2019. We also published a new version of the State Action Handbook in 2016. The Handbook on the Scope of the Antitrust Laws was published in 2015.

(2) Commentary on Legislative and Regulatory Proposals. The Committee has been very active in supporting Section commentary on proposed legislation, regulations, and other policy issues.

For instance, in March 2018, the E&I Committee assisted former E&I Chair John Roberti in composing his article, “The Role and Relevance of Exemptions and Immunities in U.S. Antitrust Law”, presented to the DOJ Antitrust Division Roundtable on behalf of the ABA Antitrust Section.

In January 2018, in response to a request from the Section Chair, we submitted Section comments along with the Legislative and State AG Committees, addressing the proposed Restoring Board Immunity Act legislation that would impact the post-NC Dental exemptions and immunity climate. Previously, we commented on the Professional Responsibility Act.

(3) Spring Meeting Programs. We have sponsored or co-sponsored a program at every Spring Meeting since our last long range plan. In 2019 we will chair Sham Litigation after FTC v. AbbVie The FTC v. AbbVie decision – calling for the disgorgement of $448 million on the basis of sham patent litigation. In addition, we will co-sponsor in 2019 with the Trade, Sports & Professional Associations Committee, a program on “Antitrust Law's Anomalous Treatment of Sports,” addressing how US courts have shown broad deference to the "rules of the game," including near-immunity status for concepts such as "amateurism."

II. Major Competition/Consumer Protection Policy or Substantive Issues Within Committee’s Jurisdiction Anticipated to Arise Over Next Three Years

A. Issue #1: Will Certain Exemptions Be Eliminated or Expanded?

A goal of the current DOJ Antitrust Division is to streamline antitrust laws, and in particular, take a hard look at exemptions and immunities. This is in the wheelhouse of our Committee’s fundamental policy issue: How much of the economy has opted out of our antitrust system? Is that a problem or are ad hoc exemptions acceptable ways to fine tune the application of the antitrust laws?

We anticipate, therefore, that efforts to enact or to repeal existing statutory exemptions and immunities will continue. In recent years, there have been efforts to repeal the exemptions for railroads and (at least in part) the McCarran-Ferguson insurance exemption. The Section and the Committee has generally supported efforts to repeal statutory exemptions. Given that repeal issues are very political it is unlikely that we will see many exemptions actually repealed.

On the other hand, proposals for new exemptions and immunities will continue to be introduced in Congress. The Committee will improve on a template for use in assisting the Section in drafting comments to Congress on newly proposed exemptions and immunities.

One development that may continue in the health care area are issues over a "COPA" or "Certificate of Public Advantage" at the state level. A COPA is a state statutory mechanism that provides certain collaborations in the health care community with immunity from private or government actions under the antitrust laws by invoking the state action doctrine. The FTC has generally opposed such efforts at the state level, but several states have used them to immunize health care mergers. This is a major development that should be monitored.

Through programs, newsletters, and Connect entries, the Committee intends to educate its members about Congressional and other efforts to repeal, or introduce new, exemptions and immunities, as well as the application of existing statutory exemptions and immunities in the courts. The Committee’s Handbook on the Scope of Antitrust Law, published in 2015, addresses developments in the statutory immunities area. It built on the prior publication, Federal Statutory Exemptions from Antitrust Law Handbook in 2007. Our Scope book will need to be updated within the next three years.

B. Issue #2: Will There Be Legislative Solutions to State Action Issues at State and Federal Levels?

The FTC’s case against the North Carolina Board of Dental Examiners put the "active supervision" prong of the state action test front and center. North Carolina State Board of Dental Examiners v. Federal Trade Commission, 135 S.Ct. 1101 (2015). The Court agreed with the FTC’s position that state occupational licensing boards comprised of market participants must satisfy the active supervision requirement. This spurred additional suits against other types of state boards involving regulated professionals. Moreover, every State had to reassess its boards to determine if there is "active supervision." Courts and state legislatures are addressing those issues. We also expect the proper framing of the clear articulation prong of the state action doctrine will be addressed. The Supreme Court spoke to the clear articulation test in FTC v. Phoebe Putney Health System, Inc., 133 S.Ct. 1003 (2013), narrowing the foreseeability test to cover only situations in which the anticompetitive conduct is the “inherent, logical, or ordinary result of the exercise of authority delegated by the state legislature.” How this test has played out in the lower courts will be of particular interest to the Committee and its membership. The COPA issues, at the state level, as previously mentioned, will impact this area.

The Committee expects to address these issues through updates to Connect, newsletters, Spring Meeting programs, committee programs, its contributions to the Annual Review of Antitrust Law Developments. The State Action Practice Manual addresses these issues, as well as the Committee’s Handbook on the Scope of Antitrust Law.

C. Issue #3: Will Noerr Be Restricted or Expanded?

The Noerr-Pennington doctrine is an exemption issue that is frequently litigated. In particular, the most likely area of further development is in the pharma industry. Alleged misrepresentations to government agencies has caught the attention of some courts. In addition, there may be more development on the pattern exception, which raises the issue of whether each act of petitioning in a pattern must satisfy the objectively and subjectively baseless requirements for sham petitioning. The Committee’s new Handbook on Noerr (forthcoming) and its earlier Handbook on the Scope of Antitrust Law addresses developments in the Noerr law.

III. Specific Long Term Plans to Strengthen Committee

The Committee provides important services to the membership of the Section through publications, drafting ABA Antitrust Section comments to proposed regulation and international competition proposed immunities, and programming. The goals of the Committee include: (1) to provide policy comments on key questions about the scope of the antitrust laws for legislation and policy-making; (2) produce a mix of publications and programming that provides relevant and useful information to our members; (3) to ensure that the Committee remains valuable to our members’ practices; and (4) to make the most productive use of electronic communications to deliver the Committee’s work product.

A. Potential Modifications to Charter: What is the Role of this Committee?

The Committee’s current charter accurately characterizes its purview—that is, addressing the scope of the antitrust laws. That scope, of course, is defined primarily in terms of exemptions and immunities (both statutory and non-statutory). The Committee, however, has dealt with other doctrines, such as preemption and primary jurisdiction. These areas may not necessarily be viewed as traditional exemptions or immunities, but they nonetheless directly affect the application and extent of the antitrust laws. In addition, the Committee expends significant efforts to address international issues, including statutory exclusions from the U.S. antitrust laws, including the FTAIA; the related doctrines of act of state, sovereign immunity, and foreign sovereign compulsion; and industry-specific exemptions and exclusions from non-U.S. antitrust laws, including blocking exemptions.

#### The aff intensifies the application of antitrust to already covered activities---it does not curtail an exemption or immunity.

#### Limits and grounds --- Eliminating exemptions provides a limited and predictable basis for prep and focuses debates on the balance between antitrust and regulation, ensuring conceptual unity.

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#### Our interpretation is that the aff can’t be the courts ---

#### Courts cannot create “antitrust law” and cannot “increase prohibitions”

Kalbfleisch 61 – Kalbfleisch, District Court judge. [Paul M. Harrod Co. v. A. B. Dick Co., 194 F. Supp. 502 (N.D. Ohio 1961)]//babcii

Defendant asserts that the term ‘antitrust laws,’ as used in the above section and as defined in 15 U.S.C.A. § 12, does not include a judgment or decree entered in connection with an antitrust case filed by the Government. Plaintiff, on the other hand, asserts that ‘the violation of the earlier decree of this court in itself gives rise to an independent cause of action under Section 4 of the Clayton Act.’ 15 U.S.C.A. § 15. Plaintiff's Brief, p. 7. Plaintiff concedes that ‘as far as he has been able to ascertain, this contention raises issues which have never before been decided by any appellate court.’ Plaintiff's Brief, p. 5. In Nashville Milk Co. v. Carnation Co., 1958, 355 U.S. 373, 78 S.Ct. 352, 2 L.Ed.2d 340, the Supreme Court held that the Robinson-Patman Act, 15 U.S.C.A. §§ 13-13b, 21a, was not included among the ‘antitrust laws' defined in Section 1 of the Clayton Act (15 U.S.C.A. § 12) and that ‘the definition contained in § 1 of the Clayton Act is exclusive.’ Id., 355 U.S. at page 376, 78 S.Ct. at page 354. The definition of ‘antitrust laws' in 15 U.S.C.A. § 12, clearly embraces only the statutes described therein. Even without such a definition the term ‘antitrust laws' could not be construed as pertaining to a judgment or decree entered by a court in connection with an antitrust case filed by the Government. Such decrees do not necessarily reflect the prohibitions of the antitrust laws but may, by their terms, seek to dissipate the effects of the past conduct of the parties and, to this end, frequently enjoin performance of acts lawful in themselves. To permit a private party to recover damages for violation of any provision of such a decree is so obviously beyond the scope of the term ‘antitrust laws,’ as used in the statute, as to require no further discussion. Defendant's motion to dismiss that part of the complaint based on alleged violations of the 1948 consent decree in United States v. A.B. Dick Company will be sustained.

#### Violation – the plan fiats the courts

#### Vote neg for limits and grounds --- Multiplies the # of aff’s by 2, removes any core checks on small aff’s, and allows the aff to circumvent any public backlash

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

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

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

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

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

#### Violation --- The plan applies only when it is not “reasonably necessary”

#### Limits and Grounds --- Explodes the number of affirmatives, and its key to link uniqueness and a unidirectional topic

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#### Topical affs must increase prohibitions on the entire economy:

#### 1---By identifies an agent

Lexico, ND (“BY English Definition and Meaning” https://www.lexico.com/en/definition/by)

PREPOSITION

1 Identifying the agent performing an action.

#### 2---“The” before a noun means whole

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

The

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

#### 3---“Private Sector” means all

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

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

#### Violation: the plan only applies to companies doing information technology

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

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#### The United States federal government should establish a framework for contingent international cooperation that restricts private sector conduct that is more restrictive of competition than reasonably necessary to enable creation of information technology standards

#### The CP’s framework multilateralizes antitrust---explicit reciprocity bypasses generic barriers AND spills over to deep economic integration

Dr. Daniel Francis 21, Climenko Fellow and Lecturer on Law at Harvard Law School, Doctorate of Laws Degree from the NYU School of Law, Master of Laws Degree from Harvard University, JD from Trinity College at Cambridge University, Former Deputy Director of the Federal Trade Commission, “Choices and Consequences: Internationalizing Competition Policy after TPP”, in Megaregulation Contested: The Global Economic Order After TPP, Ed. Kingsbury, Revised 8/26/2021, p. 40-48

B. Between Contracts and Networks: Frameworks

Another dichotomy that dominates the integration of competition policy pertains to the forms of internationalization, which in the competition policy space have generally been dominated by contract-style treaties on the one hand and by open networks on the other.166 Between these two models lies what seems to be an under-utilized alternative, which I call a “framework for contingent cooperation.”

[FOOTNOTE] 166 This binary view dominates the literature. See, e.g., Edward M. Graham, “Internationalizing” Competition Policy: An Assessment of the Two Main Alternatives, 48 Antitrust Bull. 947, 949 (2003) (“[M]echanisms [for antitrust internationalization] range from bilateral treaties creating arrangements for cooperation between or among national competition law enforcement agencies to informal working arrangements among agencies.”); Eleanor M. Fox, International Antitrust and the Doha Dome, 43 Va. J. Int’l L. 911, 912 (2003) (contrasting “horizontalism” with “globalism”); Anu Piilola, Assessing Theories of Global Governance: A Case Study of International Antitrust Regulation, 39 Stan. J. Int'l L. 207, 247 (2003) (“Rather than drafting overarching multilateral agreements on antitrust laws, cooperation efforts in the immediate future are more likely to succeed in managing existing diversity and promoting voluntary convergence based on approximation of domestically applied standards. Networks of antitrust authorities are well-suited to facilitate this process of cooperation and voluntary convergence.”). [END FOOTNOTE]

A “framework” in the sense that I am using that term is a facilitative arrangement that does not constitute a treaty under international law,167 and which does not carry the charge of international legal obligation, but which involves an exchange of specific and reciprocally contingent commitments by participant jurisdictions to engage in mutually beneficial conduct. Specifically, each party states that it will extend certain benefits to each other party so long as each other does likewise; the parties may also create supplementary mechanisms to monitor and/or adjudicate compliance with these commitments.168

A framework of this kind is not a treaty: it is what Kal Raustiala calls a “pledge,”169 and what Charles Lipson calls an “informal” agreement,170 involving no legal obligation, and it involves no commitment of the parties’ reputation for law-abiding behavior.171 On the other hand, it differs from an open, information-sharing network because it precisely specifies behavioral commitments, and because each of the parties shares an understanding that concrete consequences will promptly follow—exclusion from the benefits provided by others—if its behavior materially deviates from the terms of the commitment.172 A framework is therefore essentially a specific declaration of intention to engage in conduct that benefits others, contingent upon parallel behavior by other participating states, without obligatory status under international law.

This is, in some sense, the direct opposite of the approach typically taken in competition policy chapters in trade agreements. The provisions of competition policy chapters partake of the substance of treaty law, but are generally framed in broad terms rather than specifics, and generally do not reflect a shared understanding that specific consequences will attend breach. By contrast, frameworks do not bind in international law, are framed in specific terms than aspirational generalities, and reflect an understanding that the benefits of cooperation will be withdrawn in the event of violation.

Contingent cooperation thus depends for its effectiveness primarily upon three important dynamics. The first and most important of these is the rationality of strategic cooperation. A familiar mainstream view holds that to a significant extent states behave in international society in ways that rationally serve their interests.173 And when cooperation over a series of interactions is overall in the interests of each member of a group, but when each member faces a rational incentive to defect from the terms of cooperation in individual cases, familiar economic theory teaches that a strategic cooperative equilibrium can be maintained among the parties.174 In contingent cooperation, each party understands that if it defects materially from the terms of the framework, the other participants will withdraw the excludable benefits of cooperation, and this provides the incentive to comply.175

Contingent cooperation can be made more stable by the introduction of certain structures designed to monitor compliance (just as with a cartel among private companies).176 This might among other things involve the creation of a central “facilitator” that is responsible, in a general sense, for obtaining, collecting, and processing information necessary to sustain a cooperative equilibrium.177 Depending on the purpose and scope of the cooperation project, this could include (for example): reviewing the text of laws, regulations, and policy documents for consistency with the terms of the framework; conducting peer-review-style evaluations and certifications; hosting voluntary dispute resolution processes, including mediation and/or arbitration, to determine whether and when the framework has been violated; or even receiving and handling complaints of violations ombudsman-fashion (i.e., receiving the complaint, giving the subject of the complaint an opportunity to respond, and publishing findings and conclusions). A central facilitator could also go beyond a policing function and offer a common forum for certain forms of cooperation and information sharing. The nature of such broader functions, and the extent to which they would be useful or desirable, would depend on the nature and purpose of the cooperation.

The second dynamic that powers contingent cooperation is the normative appeal of the project itself. The point here is not unlike what Gráinne de Búrca calls “mission legitimacy”: the normative force of the underlying purpose of a cooperative project, and specifically the power of that normativity to secure the acceptance and cooperation of those who participate.178 Parties joining projects of contingent cooperation can be expected to be in some sense self-selecting: they join such endeavors because, in part, they are genuinely committed to promoting and achieving the ends that the project represents, and they embrace the project of cooperation as worthwhile.179 It may sound a little naïve to suggest that a project of cooperation may be more likely to “stick” if it has some normative appeal to the participating polities, but legal scholarship has long recognized that states do what they undertake to do more often than strictly rational analysis would predict.180 And I think the proposition that genuine commitment to a goal can contribute to compliance is in truth somewhat less naïve than the converse idea that compliance is just as likely without it.

The third source of a framework’s effectiveness is to be found in the acculturative and socializing effects of interaction in an environment in which values and practices are shared and reinforced as normative, and in which attention is paid to the existence and nature of violations. There is a rich and complex literature on the ways in which states, state actors, and the individuals within them may be “socialized” or “acculturated” by repeated engagement with others through common institutions and shared environments of normativity, eventually contributing to the emergence of obligations with genuine normative force.181 Jutta Brunnée and Stephen Toope have pointed out ways in which the force of legal obligation itself arises from shared communities of practice grounded in social reality and shared understandings, not formal commitments.182 As they put it, “[s]tability may be aided by explicit articulation of a norm in a text, but it is ultimately dependent upon [an] underlying shared understanding and a continuous practice of legality.”183

Participation in an endeavor of contingent cooperation may help to engender the development of such understandings and practices, and these may contribute to the effectiveness of the framework. In the longer term, this may even result in the creation of a legal instrument. But this progression is not necessary for acculturation to exert a reinforcing effect: for, as Anu Bradford accurately notes, there is no reason to think that “the pathway from nonbinding to binding rules” is an inevitable or even a natural one.184

The distinctive value of a framework is that it provides a low-cost way for jurisdictions to explore and participate in possible arrangements of mutual benefit that depend upon shared concrete understandings regarding future behavior, but without bearing the burden of an obligation under international law, without running the reputational risk of having to break a treaty, and without facing the domestic hurdles (or political scrutiny) that a treaty would necessitate.185 Use of such a framework may help to reduce the concerns grounded in political morality that might otherwise attend inter-jurisdictional action in sensitive areas:186 to use a term I have coined elsewhere, as contingent practices from which states could withdraw at any time, frameworks would benefit from considerable resources of “exit legitimacy.”187

Frameworks are not suited to every application. They seem particularly apt for types of international cooperation that generate excludable benefits for other participants and can be reasonably well monitored: in the sphere of competition policy, for example, this would include commitments to provide nondiscriminatory access to procurement markets as well as many forms of antitrust cooperation (including cooperation with one another’s investigations, coordination of enforcement activity, the operation of joint filing systems for merger review and cartel leniency programs, and so on). Certain guarantees of nondiscriminatory treatment by SOEs could also be extended on a selective basis. On the other hand, contingent cooperation is much less suitable for projects that require strong and highly credible guarantees of commitment from the participants (in which case a traditional treaty-contract would seem more appropriate188) or groups of parties still lacking the prerequisite agreement on the terms and ambit of desirable cooperation. Nor is it suitable in the absence of sufficient confidence in the ability or incentive of other parties to deliver on their commitments: in these cases, open dialogue and information exchange through a network would seem preferable. Nor, obviously, is it a good fit for projects in which the benefits of cooperation are non-excludable.189 To pick an obvious example, contingent cooperation would not recommend itself as a natural choice for an international project to introduce SOE discipline: the benefits are non-excludable (there is no obvious way to withdraw them selectively in the event of defection) and compliance is very difficult to monitor, so the use of a framework is unlikely to make much of a contribution.190

#### Normative convergence through antitrust harmonization prevents extinction from resource depletion, human rights abuse, and war

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A. The international political environment

At the root of international political theory is the fundamental maxim that relations between sovereign nations in the absence of mitigating factors is characterized by intense competition, mutual distrust, the inability to make credible commitments, and war.20

[FOOTNOTE] 20 Political scientists characterize the international system as “anarchic.” In the absence of world government (or other mitigating force), competition between states is largely unregulated by external laws or enforcement. The world is characterized by mistrust, the inability to contract, and the ultimate reliance on a state’s own devices. See THOMAS HOBBES, LEVIATHAN 80 (Edwin Curley ed., 1994) (in the state of nature “the condition of man . . . is a condition of war of everyone against everyone”). In fuller terms:

There is no authoritative allocator of resources: we cannot talk about a ‘world society’ making decisions about economic outcomes. No consistent and enforceable set of comprehensive rules exists. If actors are to improve their welfare through coordinating their policies, they must do so through bargaining rather than by invoking central direction. In world politics, uncertainty is rife, making agreements is difficult, and no secure barriers prevent military and security questions from impinging on economic affairs.

ROBERT O. KEOHANE, AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY 18 (1984). Efficiency-enhancing gains from trade are difficult to appropriate because trade itself (and any other form of exchange or agreement between nations) is characterized by the absence of credible commitments to future behavior. And underlying the problem is the ever-present threat of the use of force. See, e.g., Kenneth N. Waltz, Anarchic Orders and Balances of Power, in NEOREALISM AND ITS CRITICS 98, 98 (Robert O. Keohane ed. 1986) (“The state among states . . . conducts its affairs in the brooding shadow of violence . . . . Among states, the state of nature is a state of war.”). Although this dire characterization of the international environment is, of course, a stylized approximation of the real world—there are always overlying constraints on sovereign behavior in the form of norms, reputational effects, and customary international law, HEDLEY BULL, THE ANARCHICAL SOCIETY: A STUDY OF ORDER IN WORLD POLITICS (1977)—it is a useful and widely accepted heuristic for crafting a theory of international politics. [END FOOTNOTE]

As one commentator notes, “Nations dwell in perpetual anarchy, for no central authority imposes limits on the pursuit of sovereign interests.”21 And states are “unitary actors who, at a minimum, seek their own preservation and, at a maximum, drive for universal domination.”22 As a result, states operating on the international stage are unable to judge the sincerity of each others’ stated intentions when those intentions are contrary to this manifest interest. Because of self-help rules, states are forced in the main to assess their own security environment by assessing the capabilities of competitors, downplaying their motives. Given that the nature of the competition can implicate the fundamental survival of one (or more) of the actors, actions taken by one state to improve its own security must necessarily decrease the security of its competitor; in the absence of mitigation, security is a zero-sum game.23 In a world where cooperation is exceedingly difficult (because there is no authority to enforce agreements, nor any basis for assessing the reliability of another state’s commitments), international relations are characterized by a continuous race to the bottom, a mindless arms race rather than the opportunity to realize gains from cooperation.

It is obvious that not all relations between states are characterized by the security dilemma, however. Canada, for example, shares an unprotected border with the most powerful nation in the world without degenerating into a destructive and costly arms race. By some mechanism, then, Canada must be able reliably to judge U.S. intentions, even absent the apparent ability by the United States credibly to bind itself to a nonaggressive policy toward Canada. The key to mitigating the pressures of the security dilemma is the ability to distinguish a state with aggressive and expansionist tendencies from a benign one.24 States can be distinguished by their fundamental type. They can be classified as “revisionist,” that is, they seek to subvert the dominant order, or they can be classified as “status quo,” that is, they seek to support it.25 But, as noted, a state’s ability to judge another’s intentions (as opposed simply to counting its armaments) is extremely tenuous and comes at great cost. In fact, political science offers few well-understood mechanisms for judging a state’s propensity for aggression.

At the same time, hegemonic states have an abiding interest in spreading and maintaining their dominant worldview.26 Not only is it imperative that dominant states receive credible signals about other states’ intentions, but it is also important that dominant states attempt to inculcate their norms within other states that, over time, might mount credible challenges to the dominant states’ security.27 The spread of hegemony through internalization of norms occurs for three reasons. First, states with similar institutions and sympathetic domestic norms are simply better and more reliable trading partners, and it is in the hegemon’s economic interest to instill its norms.28 Second, states with defensive military postures and that adhere to the status quo present significantly less security risk to dominant states.29 And finally, the hegemon has a normative interest in the spread of its culture, its worldview, and its norms.30 This conception of the playing field upon which states interact leads to the conclusion that, entirely apart from the immediate and substantial economic benefits to a state from well-ordered interactions with other states, hegemonic states also have a national security and a normative interest in the information to be gleaned from the fact that these interactions are, in fact, well ordered.

In the absence of centralized enforcement, privately held and nonverifiable information as to a state’s fundamental type is the critical problem in assessing motives.31

[FOOTNOTE] 31 See KEOHANE, supra note 20, at 31 (“Order in world politics is typically created by a single dominant power [or hegemon].”). States are consequently classified as one of two types, “revisionist” or “status quo,” based on their acceptance and adherence to the political norms, institutions, and rules created by the hegemon. Status quo states are those that try to improve their condition from within the framework of the accepted world order. Revisionist states, by contrast, seek to gain position both by working outside that order and by working to subvert the hegemonic order itself. For instance, the existing world order is generally accepted to be that created by the United States after World War II. It comprises a liberal international economic order, the use of multilateral institutions (such as the United Nations and the WTO), negotiation for dispute resolution rather than the threat of violence, and the promotion of liberal democratic moral norms. See, e.g., Schweller, supra note 24, at 85; HANS J. MORGENTHAU, POLITICS AMONG NATIONS: THE STRUGGLE FOR POWER AND PEACE 32 (1948). Trade disputes between status quo states (like tariff disputes between the United States and Europe) are resolved through peaceful negotiation rather than the threat of war. Although status quo states do not entirely eschew the use of violence, they typically seek international authorization and legitimization before employing military force, as in the multilateral operations in Iraq, Kosovo, and Afghanistan. Revisionist states, on the other hand, such as North Korea, Iran, and China, will more readily use military force as a bargaining tool and are more reluctant fully to participate in transparent military, economic, and political negotiations. [END FOOTNOTE]

States wishing to escape the pressures of the security dilemma and engage in cooperative behavior need a means of conveying their preferences to others in a credible manner. There are, in general, two means by which such information can be transmitted: states can either bind themselves in such a way that they are unable to deviate from a stated behavior (known as “hands tying” in Schelling),32 or they can signal their intention to engage in a specified course of action by incurring costs sufficiently large that they discourage the misrepresentation of preference.33

International institutions can play a crucial role in facilitating the transmission of this information.34 In particular, international agreements over the terms of trade, even without binding supranational enforcement authority, provide a means for states to bind themselves to a desirable course of behavior in the short run and, more importantly, to signal their acquiescence to the ruling world order in the long run. Because compliance with treaty obligations often requires signatories to alter their domestic laws to reflect the terms of the treaty, the costs of compliance can be substantial. In the short run, to the extent that states enforce their domestic laws they can bind themselves to a certain course of behavior. In the long run, a state’s willingness to incur the substantial costs of changing its laws, both the transaction costs inherent in changing domestic laws and the even more substantial costs in domestic political capital, signals a willingness to engage other states on the terms set by the reigning international power. Moreover, there may be unintended effects, as changes in domestic laws result in a new set of domestic incentives to which actors respond, and new windows of opportunity may open up through which policy entrepreneurs can push for the internalization of new norms.35 Competition laws in particular are susceptible to this mode of analysis.

Most nations have adopted competition laws as a way to actualize (as well as to symbolize) a degree of commitment to the competitive process and to the prevention of abusive business practices . . . . The introduction of competition laws and policies has also gone hand in hand with economic deregulation, regulatory reform, and the end of command and control economies.36

The surest way to remove the threat of war, increase wealth, conserve resources, and protect human rights is through fundamental agreement between all states (or at least effective agreement between verifiably status quo states) under a normative umbrella that promotes all of those values. This normative convergence can be effected through the stepwise internalization of the sorts of economic and democratic values inherent in international economic liberalization, perhaps most notably through the adoption of principled international antitrust standards.37

### OFF

#### The United States Supreme Court ought to, deploying the technique utilized in Great Northern Railway Company v. Sunburst Oil and Refining Company:

#### decline to rule that private sector conduct that is more restrictive of competition than reasonably necessary to enable creation of information technology standards ought to be prohibited on the basis that such a decision would undermine judicial deference to reliance interest

#### announce that existing precedent in this area is no longer reliable and that relevant parties should be on notice that the reliance interests that caused it to be upheld in this case will not apply to future challenges

#### not deny certiorari in challenges on the issue

#### CP solves and avoids - sunbursting avoids the downfalls of an unpredictable decision but causes legal change

Faure 14 – Michael Faure, Professor of International and Comparative Environmental Law at Maastricht University and Professor of Comparative Private Law and Economics at the Rotterdam Institute of Law and Economics (RILE), Erasmus School of Law, Morag Goodwin, Associate Professor in European and International Law, Tilburg Law School, and Franziska Weber, Junior Professor for Civil Law & Law and Economics at the Institute of Law and Economics, University of Hamburg, “THE REGULATOR'S DILEMMA: CAUGHT BETWEEN THE NEED FOR FLEXIBILITY & THE DEMANDS OF FORESEEABILITY. REASSESSING THE LEX CERTA PRINCIPLE”, Albany Law Journal of Science and Technology, 24 Alb. L.J. Sci. & Tech. 283, Lexis

Prospective overruling is a judicial technique in which a [\*349] previous precedent or authority is overruled without the new ruling having retrospective effect. n386 It thus represents a departure from the fundamental notion that judicial decisions that develop or change the law necessarily have retroactive effect. n387 It is, or has been, used by a court wishing to overturn or amend bad law, but is wary of the consequences of the retrospective application of their finding. Such consequences may include the inherent unfairness that would result to an individual who had relied on the existing law in good faith n388 or because of reasons of practicality, where the decision would have sweeping consequences for the operation of the judicial system. n389 Although appearing similar, prospective overruling differs from obiter dicta in two significant ways. Firstly, while judges can use obiter dicta to declare certain rules to be bad law or to comment on the likely direction of necessary legal reform, such comments do not entail that the decision in the case before them will be inconsistent with a future case. n390 Secondly, obiter dictum, while possibly highly influential, does not benefit from stare decisis and therefore is not binding. n391

There are a number of different ways in which a court can use prospective overruling. n392 Firstly, a court can announce a new rule or standards that will apply only to future cases, i.e., not to the case before it in the instant dispute. The old rule would also govern any cases that arose from action taken prior to the [\*350] announcement of the new rule but determined after it. n393 This has been called "pure" prospective overruling. n394 A second approach would be to announce a new rule that is only applicable to future cases that arise after the announcement but, as an exception, to apply it to the instant case. n395 A third alternative is to apply the new rule not only to the case at hand but to all other cases already pending at the time of announcement. This third approach excludes those cases in which the action that motivated them predates the announcement but where proceedings had not already been commenced at the moment of declaration of the new rule. n396 Finally, a fourth possibility would be for a court to announce a new rule not having retroactive effect but to suspend the entry into force of that new rule until a future date. n397 This technique is used to allow those actors likely to be affected by the change to adapt their behavior accordingly and to give the legislature the opportunity to enact a different rule should they so wish. n398 Traynor termed this form of prospective overruling "prospective-prospective overruling." n399 In this version of prospective overruling, the new rule does not apply to the case in which it is announced, or to any other cause of action that arises before the delayed entry into force of the new rule. n400 The Court of Justice of the European Union, for example, has accepted the need to place temporal limitations on its rulings in the interests of justice, although it has declared that it does so only in exceptional circumstances. n401 A variation on this form of [\*351] prospective overruling has been suggested by Advocate General Jacobs, whereby both the retrospective and prospective effect of a ruling of the Court of Justice of the European Union could be subject to a temporal limitation; in that case until the Member State concerned has had a reasonable opportunity to consider the introduction of amending legislation. n402

In addition to the European Union, a number of jurisdictions have used or accepted the possibility, if only in principle, of prospective overruling in exceptional circumstances, including the United States, n403 India, n404 New Zealand, n405 Canada, n406 the United Kingdom n407 and Germany. n408 The European Court of Human Rights has been understood to issue prospective rulings, n409 although there is some doubt as to whether its "dynamic" approach to convention interpretation is properly classified as such; n410 however, it certainly accepts such rulings in domestic courts as compatible with the rule of law. n411 At its apogee in the United States, the United States Supreme Court ruled in the case of Linkletter v. Walker, that in both criminal and civil cases, "the accepted rule today is that in appropriate cases the Court may in the interests of justice make the rule prospective." n412 However, since the 1970s, the use of retrospective overruling in the United States has been in retreat. While it remains unclear as to whether the use of "pure" prospective overruling (where the new rule does not apply to the case at hand) has been abandoned in civil cases, n413 the Supreme Court [\*352] has overturned its earlier enthusiasm and now prohibits prospective overruling in criminal cases n414 and the use of selective prospective overruling (i.e., "non-pure") in civil cases. n415 Yet, despite the discrediting of prospective overruling as a technique in the US more than twenty years ago, it continues to attract the interest of senior common law judges. n416 In a 2005 case, In re Spectrum Plus, the House of Lords found that it was theoretically possible to overrule a judgment with prospective effect only; n417 and in 2007, two members of the New Zealand Supreme Court accepted the same possibility. n418

3. The Pros and Cons of Prospective Overruling

Given that the heyday of prospective overruling has, until recently, been behind us, what reasons are there for being suspicious of the technique? There are, it seems, two main reasons for rejecting prospective overruling in its entirety. The first has been articulated by the Australian High Court in its emphatic refusal to countenance the use of prospective overruling and concerns an understanding of the nature of judicial interpretation. In the case of Ha v. New South Wales, the Court ruled that, "it would be a perversion of judicial power to maintain in force that which is acknowledged not to be the law." n419 In this reading, where a court determines that the rule they are required to apply is bad law, i.e., that the "real law" is actually now a different standard, it is simply untenable to continue to apply the wrong standard, even where it results in a manifest injustice to one of the parties before it. n420 The notion that prospective overruling is "a perversion of judicial power" gains further credence from the commonly accepted understanding that the role of the judiciary is to interpret the law in light of the case before it, where the primary function of the courts is to [\*353] adjudicate between parties; going beyond the particular case by making a general statement about the law is seen by some as "blatantly legislative." n421 While the legislature looks forward, the proper direction of the courts' attention is backwards, applying the existing law to situations that have already happened. This view was echoed by the United States Supreme Court in Griffith v. Kentucky, in which it ruled, concurring with earlier minority opinions by Justice Harlan, that the "failure to apply a newly declared constitutional rule to criminal cases pending on direct review violates basic norms of constitutional adjudication." n422

The second reason for critics to reject prospective overruling concerns the impact upon individuals of arbitrariness to which prospective overruling gives rise. In Griffiths v. Kentucky, the United States Supreme Court stated quite simply that "selective application of new rules violates the principle of treating similarly situated defendants the same." n423 Once a rule or practice has been declared bad law or unconstitutional, it violates the central notion of equality before the law if the new rule is applied to benefit one individual but not another. n424 These concerns can be somewhat alleviated by applying the new rule to all cases stemming from action arising at or after the time of the cause of action of the case in which the new rule is announced, i.e., by limiting the normal retrospective effect of rulings only marginally, but to do so would be to reduce considerably the possible benefits of prospective overruling. n425 In effect, those parties who had relied in good faith on the previous standard in such actions would be held to a new, stricter standard and thus their legitimate expectation of and right to legal certainty would [\*354] be compromised. n426

What, then, are the benefits? In particular, would other, less dramatic, techniques do the same job without encountering the hostility that prospective overruling can inspire? Obiter dicta could be used, for example, to indicate a likely direction of legal reform without actually introducing a new rule. n427 However, it is in large part the binding nature of a prospective decision that makes it such a useful technique in balancing flexibility and foreseeability. n428 While obiter dicta could be used in a similar way, although such statements lack the ability to bind future courts, they reduce the foreseeability of parties the same way incentives for operators to adapt their behavior are reduced. Operators may instead play a waiting game in which they fail to carry out adaptations in the hope that a different court will continue to apply the existing standard. Prospective overruling, we suggest, cannot be replaced by the less controversial tool of obiter dictum. Moreover, obiter dictum would obviously only provide a solution in those legal systems where it exists, which is not the case for many civil law systems. n429

The first main benefit of prospective overruling follows from the assertion that it is a perversion of judicial power to uphold a law that is understood to be unsound. n430 Courts are rightly reluctant to overturn a precedent, even where they are convinced of the unsoundness of the rule in question, where the harm caused by retrospective change is greater than the supposed benefits. n431 Thus, Justice Traynor suggested, in his classic article on the topic, that the main benefit of the technique of prospective overruling is that it enables courts to "change[] bad law without upsetting the ... expectations of those who [have] relied upon it." n432 For Traynor, prospective overruling, in direct contrast to its critics, is a necessary tool for the proper administration of justice. n433 Allowing bad law to stand simply to overturn a [\*355] precedent would entail unacceptable and unreasonable hardship for one of the parties concerned is an equally perverse understanding of the judicial role. n434

### OFF

#### The aff is sua sponte – it makes a decision in absence of arguments presented before the court – that crushes court legitimacy

Milani & Smith 02 (Adam and Michael, both are Assistant Professors, Mercer University School of Law, “Playing God: A Critical Look at Sua Sponte Decisions by Appellate Courts,” 69 Tenn. L. Rev. 245, Winter, lexis)

The heart of the American legal system is the adversary process in which trained advocates present the parties’ facts and arguments to neutral decision makers. The fundamental premise of the adversary process is that these advocates will uncover and present more useful information and arguments to the decision maker than would be developed by a judicial officer acting on his own in an inquisitorial system.3 The adversary process is also said to “promote[] litigant and societal acceptance of decisions rendered by the courts”4 because a party who “is intimately involved in the adjudicatory process and feels that he has [they have] been given a fair opportunity to present his case . . . is likely to accept the results whether favorable or not.”5 Indeed, the Joint Conference on Responsibility of the American Bar Association and the Association of American Law Schools stated that “[i]n a very real sense it may be said that the integrity of the adjudicative process itself depends upon the participation of the advocate.”6 Accordingly, most lawyers probably never think about the possibility that a court will decide a case on an issue that the court itself raises and which was neither briefed nor argued by the parties. But we all know it happens. We even have a name for such a decision: [is] sua sponte. Translated from its original Latin, “sua sponte” means “on his or its own motion.”7 In the legal setting, sua sponte describes a decision or action undertaken by a court on its own motion8 as opposed to an action or decision done in response to a party’s request or argument. As such, the concept of “sua sponte” is an important exception to two basic [the] principles of our adversary system of adjudication: (1) that the parties will control the litigation, and (2) that the decision maker will be neutral and passive.9 One of the clearest manifestations of these principles is that the parties themselves, not the decision maker, determine what issues will be adjudicated. In the context of judicial decision making, a court deviates from its traditional “passive” role in the adjudicatory process when it raises an issue not identified by the parties but which it deems relevant to the legal controversy before it. Nonetheless, raising issues sua sponte is not an uncommon practice.10 In fact, legal scholars have identified several kinds of issues that are commonly raised by courts on their own. First, both trial and appellate courts often raise jurisdictional issues such as standing, subject matter jurisdiction, and mootness sua sponte.1

#### That corrodes rule of law via abdicating judicial legitimacy.

Donaldson ’17 [Michael J; Partner at Burnet, Duckworth & Palmer, LLP, Master of Laws from Columbia; 2017; “Justice in Full Is Time Well Spent: Why the Supreme Court Should Ban Sua Sponte Dismissals”; http://www.bdplaw.com/publications/justice-in-full-is-time-well-spent-why-the-supreme-court-should-ban-sua-sponte-dismissals/; Quinnipiac Law Review, Vol 36; accessed 9/15/21; TV]

There is a lot wrong with sua sponte dismissals. They are inconsistent with the adversary system, and change the judge's role from referee to contestant.85 They can undermine respect for the legal system. And they increase the likelihood of errors, leading to unnecessary appeals and a waste of judicial resources." But most importantly, they lack the very due process the courts are supposed to safeguard. A. Failure to Provide Due Process Sua sponte decisions are inconsistent with due process.89 Period. There is no other way to look at it. 90 Not only does a plaintiff surprised by a sua sponte dismissal not receive "due" process, she receives no process at all.91 She has no idea her lawsuit is in jeopardy of being dismissed, no idea what the reasons for that dismissal might be, and no opportunity to respond. 92 This is the case whether the court's dismissal decision is right or wrong. 93 As Allan Vestal puts it: When [issues are] considered sua sponte both parties are taken completely by surprise and the court decides the matter on grounds not urged by either. Neither has had any opportunity to consider the matter, and both are now bound by res judicata grounded on considerations which represent not well reasoned positions for the litigants, but rather only the fortuitous decision of a 94 wayward court. The reference to res judicata here is important. As Milani and Smith point out, the res judicata doctrine requires a party or its privy to be a participant in the former proceeding before the court can bind him to the consequences of that proceeding because, according to the Supreme Court, "The opportunity to be heard is an essential requisite of due process of law in judicial proceedings."95 If this is the standard applied to former proceedings, how can it not apply to proceedings currently before the court? Lon Fuller once wrote of sua sponte decisionmaking: [I]f the grounds for the decision fall completely outside the framework of the argument, making all that was discussed or proved at the hearing irrelevant ... the adjudicative process has become a sham, for the parties' participation in the decision has lost all meaning.9 6 The situation is even harder to defend when there is no hearing at all. 9 B. Undermining Respect for the Legal System The perception that the courts are regularly failing to provide due process cannot do anything but undermine respect for the legal system.9 8 Sir Robert Megarry, in the speech quoted at the beginning of this article,99 underlined the importance of sending the unsuccessful litigant away feeling as though he has had a fair hearing.' Justice Harlan was obviously cognizant of this problem in his dissent in Mapp, when he warned that the Court's sua sponte decision in that case was "not likely to promote respect ... for the court's adjudicatory process."o This is not a farfetched concern. Offenkrantz and Lichter note that in the Second Circuit's high-profile decision to "[sua sponte remove] Judge Shira Scheindlin from further proceedings in two stop-and-frisk cases," an order which left the Judge "completely blindsided," "newspapers were reporting that appellate courts had carte blanche to raise and decide important issues in a case without ever seeking the input of any of the parties to it."' 0 2 Megarry tells a story of a client of his who had a fatal flaw in his case, but insisted on going ahead anyway.10 3 Instead of seizing on the fatal flaw at the outset, the trial judge heard the case all the way through.1 0 4 The client won on his two collateral points, but, as expected, lost on the key issue. o Megarry tells the story of what happened next: The course taken by the judge must have prolonged the hearing by an hour or two. But the effect on the defeated tenant was striking. True, he had lost the last point and the case as a whole; but he had been victorious on the other two points. All that nonsense about the agent's lack of authority and the letter not having been received in time had been blown away by the judge. It was a pity about the wording of the letter, of course; but he had seen his case being put in full, and none of his grievances had been left unheard or unresolved. This is as it should be. Courts must not, as Megarry puts it, give in to "the temptation of brevity."'0 o Their very legitimacy hangs in the balance. A loss of respect for the courts marks the beginning of the unraveling of the rule of law. This is simply too high of a price to pay for efficiency.

#### Extinction.

Davis and Morse ’18 [Christina and Julia; September 19; Professor of Government at Harvard University; Professor of Political Science at the University of California at Santa Barbara; International Studies Quarterly, “Protecting Trade by Legalizing Political Disputes: Why Countries Bring Cases to the International Court of Justice,” vol. 62]

Trade, Conflict, and Adjudication We argue that countries turn to international adjudication to protect trade flows under conditions of strong economic interdependence. This argument is built on two key assumptions. First, states believe that an international dispute over territory, fishing rights, or another salient issue could harm trade. Second, states view international adjudication as an effective way to end the dispute. Given the risk of harm to economic relations and the potential for courts to contribute to conflict resolution, states with high trade value vested in a relationship will be more willing to undertake costly litigation. This section elaborates on the general conditions of our theory and then explains why the ICJ is a good venue for testing the relationship between economic interdependence and international adjudication. The Adverse Impact of Conflict on Trade The premise that conflict disrupts trade is central to the theory of commercial peace. Russett and Oneal (2001) draw on the work of philosopher Immanuel Kant to argue that interdependence deters conflict by raising its costs. According to this reasoning, war interrupts trade while peace promotes stable commerce, leading states to calculate that the gains of peace are significant compared to the costs of war.4 Other perspectives focus on the informational role of interdependence to lower uncertainty between states (Reed 2003). Gartzke, Li, and Boehmer (2001) contend economic interdependence allows states to signal their resolve through their willingness to bear the economic costs of confrontation.5 A host of empirical studies supports the idea that conflict reduces trade (Keshk, Reuveny, and Pollins 2004; Long 2008). Several potential channels connect trade and conflict, including direct damage to infrastructure and transportation resulting from actual conflict, sanctions policies, and informal discrimination by governments or private actors. Glick and Taylor (2010) find that the effect of war on trade is significant and persistent. At a lower level, political tensions may also suppress trade (Pollins 1989; Fuchs and Klann 2013). Consumer boycotts and financial market reactions in some cases have led to adverse market impact (Fisman, Hamao, and Wang 2014; Heilmann 2016; Pandya 2016). Simmons (2005) finds that territorial disputes have a sizable negative impact on trade even in the absence of militarized action. Others suggest states anticipate the potential adverse impact of conflict on trade, and therefore trade less to begin with if they think that war is likely. In such a scenario, the marginal economic costs of war should be insufficient to change a state's calculation for going to war (Morrow 1999; Barbieri 2002). Gowa and Hicks (2017) contend that trade is largely diverted through third-party channels, which compensate for having less direct trade with the adversary. We assume that leaders and business constituencies on average believe that conflict damages trade relations. Political conflict could lead governments to adopt sanctions against an adversary or to restrict financial flows. Violence likely disrupts trading routes and slows the movement of goods. The potential for adverse financial market reactions and consumer response adds further unpredictability about the risk of spillover from political disagreement into economic harm. Substitution through third parties could alleviate the harm, but this would still increase trade costs. The expected harm to trade motivates states to pursue the resolution of disputes. Adjudication as a Conflict Resolution Mechanism When states want to resolve an interstate dispute, why would they choose adjudication rather than negotiations, economic sanctions, or militarized action? In some cases, the decision follows an episode of military conflict as part of an effort to normalize relations. In other disputes, countries may turn to a legal venue to prevent a problem from ever reaching the stage that could produce serious political tensions or threats of force. The literature offers three broad types of explanations for why states pursue adjudication: legitimacy, informational benefits, and domestic obstacles to settlement. At the systemic level, international norms support peaceful conflict resolution. Some contend that rule of law has come to shape the identities of states, forming norms about appropriate action in both the domestic and international spheres (Finnemore and Sikkink (1998, 902). When international law has been established through fair procedures and offers coherent principles, it forms a legitimate source of authority in international affairs that generates an independent “compliance pull” on state behavior (Franck 1990, 65). International courts combine both legitimacy and authority as they help states solve specific disputes about how to interpret international law; the growing role for international courts in international affairs represents an important trend (Alter 2014; Alter, Helfer, and Madsen 2016). Integration with national courts has reinforced states’ use of the European Court of Justice (ECJ), which stands out for its expansive caseload and impact on state behavior (Alter 1998). The ICJ has achieved a relatively strong record of compliance with rulings (Schulte 2004; Llamzon 2007; Mitchell and Hensel 2007; Johns 2012). Legal settlement can help states coordinate policies through the provision of information. Compared to bilateral negotiations or nonbinding third-party arbitration, adjudication conveys a government's willingness to reach an agreement (Helfer and Slaughter 2005; Gent and Shannon 2010). Having taken the public step to initiate legal action, a government would appear inconsistent and incur a reputational penalty if it also took unilateral measures such as sanctions or military actions before the legal process had reached a conclusion. This shapes the diplomatic context because participants know that the matter will neither escalate into violence nor disappear through neglect. A court ruling offers a focal point amidst uncertainty about how to interpret the terms of an agreement (Ginsburg and McAdams 2004; Huth, Croco, and Appel 2011). As the record-keeper of past actions, courts support systems of tit-for-tat and reputational enforcement (Milgrom, North, and Weingast 1990; Carrubba 2005; Mitchell and Hensel 2007). In these informational theories of courts, states may comply with court rulings in the absence of coercive measures or the threat of sanctions because the reputational costs of noncompliance are too high. Rather than simply interpret law, courts coordinate expectations about enforcement. Johns (2012) models the circumstances whereby mobilization of third-party actions in support of a court ruling generates endogenous enforcement that can affect outcomes. In this way, multilateral enforcement makes an international court different from the pressure available in bilateral negotiations. International courts also offer a way for states to frame settlements to appeal to domestic audiences (Fang 2008). Simmons notes that even when the same deal could be reached in negotiations or through a court decision, a negotiated settlement could be viewed as a sign of weakness while legal resolution would be a positive signal for future cooperation (Simmons 2002, 834). This dynamic occurs because “domestic groups will find it more attractive to make concessions to a disinterested institution than to a political adversary” (Simmons 2002, 834). In research on several prominent ICJ cases, Fischer (1982, 271) emphasizes the court has helped governments to save face. Consequently, those governments unable to reach agreements over domestic opposition may find it easier to do so with the involvement of a third-party ruling. Allee and Huth (2006a) show that governments with higher levels of domestic political constraints are more likely to choose adjudication over negotiation for settling territorial disputes. Domestic political constraints also increase the probability of filing complaints at the WTO (Davis 2012). The mobilization of domestic groups plays a critical role in litigation patterns at the ECJ (Alter and Vargas 2000).a

## Case

### Advantage 1

#### Bauer and Durbin ev both say they solve econ growth no takesies backsies --- that’s bad ---

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

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

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

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

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

Reality check about green growth

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

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

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

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

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

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

Who’s got the best theory?

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

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

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

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

#### Warming causes extinction.

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

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

#### Cognitive collapse – extinction

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

Subtler social consequences of accelerating innovation are becoming ever more pervasive. Technological acceleration, combined with market competition, are motors of what sociologists call social acceleration (Rosa and Scheuerman, 2009; about the link to innovation, see, e.g., L¨ubbe, 2009, p. 169-170), leading some aspects of society to change at accelerating rates and forcing people to adapt. An example is the mounting pressure over workers to increase their adaptability and allied capabilities, collectively known as employability (Chertkovskaya et al., 2013). Due to what the economic literature refers to as bounded rationality, the human capacity to process change, to adapt and to become adaptable have limits which will be overcome if the pressure grows exponentially. As put by L¨ubbe (2009, p. 175), Processes of growing up, just like processes of growing old, become precarious if the quantity of cultural resources that have consistent validity over the short duration of an average life dissolves with disorienting consequences. This phenomenon holds some analogy to ecosystem degradation, which, in part, is due to limited capacities to track anthropogenic changes (e.g., Devictor et al., 2012) rather than the inherent implications of, say, a given temperature. The pressure over people’s lives is not just due to the speed of change in general but also to the fact that much cutting-edge innovation pursues efficiency in the absorption and use of a limited resource as is human attention. This phenomenon was already conceptualized by Simon (1971) as attention economy and it is becoming increasingly difficult to escape its influence8 . If models like the one in this paper apply, even approximately, in this case, exponential growth will be linked to a roughly exponential increase in efficiency in the use of this resource (up to saturation), i.e., efficiency in shaping preferences and behavior to the benefit of firms. Such considerations become all the most important when taking into account the incipient innovation in the very patterns of innovation. The disruption of traditional innovation curves is underway because of design automation, which has been already going on for some time (Lavagno et al., 2006). In the field of evolvable hardware there are instances of evolutionary algorithms developing highly effective devices whose functioning was elusive for human engineers (Bostrom, 2014, p. 154). The substantial progress that most experts expect for AI after some decades (M¨uller and Bostrom, 2016; Dafoe and Russell, 2016) is likely to result in deep changes in all aspects of society, including the generalization of such second-order innovation. When this occurs, the model in this paper and the ensuing results will no longer hold, because that transformation will open the doors to endogenous superexponential innovation. Superexponential innovation is the condition noted in sec. 3 to sustain absolute decoupling beyond some point, but only until the physical limit cf is reached, and if rebound (Schneider, 2008) is avoided. What this entails in terms of ultimate limits to growth will depend on the significance of such enhanced innovation for less clear-cut issues such as those dealt with in sec. 4.2. However, if this growth is to be green or, more generally, serve the human interest, the problems dealt with above in this same section become even more relevant. Even more important than human capacity to adapt to accelerated changes would be the human limited capacity to take complex decisions, which, in a system based of competition among economic units such as firms, is likely to mean, as noted in Pueyo (2018), an unavoidable, massive automation of decisions, which would become ever more unintelligible and could fully dissociate the directions taken by economies from human interests. This section points to some widely ignored but crucial aspects for any economic recipe intended to serve the human interest as green growth is supposed to (as well as for recipes intended to serve the interests of other sentient beings). The first suggestion that emerges is that innovation, however desirable it might be, would need to take place at some pace commensurate with the capacities of people to adapt and of institutions to pre-adapt. Given the strong two-way causal relation generally assumed to exist between innovation and growth, this is a reason to abandon the logic of indefinite growth. The second suggestion is that, given the formidable forces that technology is unleashing and their potential to produce mass destruction or mass dystopia, the most basic institutional change that is needed is a transition from a system based on competition and microeconomic growth imperatives (see Richters and Siemoneit, 2018) to a system that favors solidarity and sufficiency, as previously discussed in Pueyo (2018). Pueyo (2018) also suggests that the broad spectrum of the potentially affected by such impacts creates some hope for collective action in this direction. Such a radical change will also be a form of social acceleration, but transient and oriented by a common purpose, distinct from a state of permanently accelerated and largely meaningless change

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

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

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

#### Smart Cities fail

Zuo and Zhao 13 (Jian Zhen-Yu, School of Natural and Built Environments, University of South Australia, School of Economics and Management, North China Electric Power University in Beijing. Green building research–current status and future agenda: A review, Renewable and Sustainable Energy Reviews, Elsevier)

.3.4. Criticisms There is no lack of **negative experience with green buildings**. The higher **upfront cost presents** one of most significant issues to the investors. Under the current macroeconomic environment, it is difficult to convince clients to inject extra investment on green features to their developments. In addition, some studies have reported thermal comfort issues associated with green buildings such as high level of humidity, higher temperature during summer, etc. [67,77]. Paul and Taylor disagreed with the overwhelming benefits of green building in terms of thermal comfort [78]. Their study found that there is no significant difference between thermal comfort level of green buildings and that of conventional buildings (equipped with heating, ventilating, and air-conditioning systems). According to some occupants, it is a serious concern without the control of the thermal environment inside the building such as temperature, ventilation, and lighting [79]. This is often associated with reduced satisfaction of building users [80–82]. Indeed, the control of temperature, health, ventilation and heating is ranked by occupants as one of most important factors for the refurbishment of historic buildings [83]. Other issues include: the privacy due to the open space, noise, fire performance of eco-materials, structural safety issues due to installation of small scale solar PV or wind turbines [69,84–89]. The privacy and noise issues associated with green buildings are usually related to the office layout [90,91]. Some studies questioned the real performance of green building such as energy efficiency and water efficiency. For instance, Newsham et al. Analyzed energy data of 100 LEED certified buildings in US which confirmed that LEED certified building achieved an average of 18%–39% of energy savings per floor area compared to conventional counterparts [92]. However, their study also highlighted some 30% of LEED certified buildings consume more energy than conventionally designed buildings. Scofield examined the same set of buildings by Newsham et al.'s study with a consideration of off-site energy consumption, i.e. the generation and delivery of electricity to the building [93]. His findings showed that the source energy does not differentiate between LEED certified buildings and conventional buildings. Menassa et al. examined the energy performance of 11 U.S. Navy LEED-Certified Buildings [94]. Their analysis showed that majority of these buildings did not achieve the **mandatory energy and water efficiency target**. In fact, the energy consumption of majority of these buildings is higher than the national average level. Sabapathy et al.'s study found that LEED facilities achieved higher energy efficiency however does not necessarily translate into energy cost savings due to a number of factors such as the type of lease agreement and types of occupants [95]. Feige et al. examined 2500 residential buildings in Switzerland which found that sustainability feature of dwellings (e.g. water efficiency, health and comfort) helped to increase rental price [96]. However, there is negative correlation between energy efficiency of residential property and their rental premium which is arguably due to lease structures (e.g. bundling the energy cost with the rent). Therefore, more studies are required to provide evidence for cost benefit analysis of green buildings in a comprehensive manner so that decision making process is better informed. A longitudinal study helps to collect related data in a certain period of time. This will then allow a direct evidence-based comparison between performance of green buildings and that of conventional buildings

### Advantage 2

#### No cyber impact – attribution, restraint, and capabilities.

Lewis ’20 [James Andrew; 8/17/20; senior vice president and director of the Strategic Technologies Program at the Center for Strategic and International Studies; "Dismissing Cyber Catastrophe," https://www.csis.org/analysis/dismissing-cyber-catastrophe]

More importantly, there are powerful strategic constraints on those who have the ability to launch catastrophe attacks. We have more than two decades of experience with the use of cyber techniques and operations for coercive and criminal purposes and have a clear understanding of motives, capabilities, and intentions. We can be guided by the methods of the Strategic Bombing Survey, which used interviews and observation (rather than hypotheses) to determine effect. These methods apply equally to cyberattacks. The conclusions we can draw from this are:

Nonstate actors and most states lack the capability to launch attacks that cause physical damage at any level, much less a catastrophe. There have been regular predictions every year for over a decade that nonstate actors will acquire these high-end cyber capabilities in two or three years in what has become a cycle of repetition. The monetary return is negligible, which dissuades the skilled cybercriminals (mostly Russian speaking) who might have the necessary skills. One mystery is why these groups have not been used as mercenaries, and this may reflect either a degree of control by the Russian state (if it has forbidden mercenary acts) or a degree of caution by criminals.

There is enough uncertainty among potential attackers about the United States’ ability to attribute that they are unwilling to risk massive retaliation in response to a catastrophic attack. (They are perfectly willing to take the risk of attribution for espionage and coercive cyber actions.)

No one has ever died from a cyberattack, and only a handful of these attacks have produced physical damage. A cyberattack is not a nuclear weapon, and it is intellectually lazy to equate them to nuclear weapons. Using a tactical nuclear weapon against an urban center would produce several hundred thousand casualties, while a strategic nuclear exchange would cause tens of millions of casualties and immense physical destruction. These are catastrophes that some hack cannot duplicate. The shadow of nuclear war distorts discussion of cyber warfare.

State use of cyber operations is consistent with their broad national strategies and interests. Their primary emphasis is on espionage and political coercion. The United States has opponents and is in conflict with them, but they have no interest in launching a catastrophic cyberattack since it would certainly produce an equally catastrophic retaliation. Their goal is to stay below the “use-of-force” threshold and undertake damaging cyber actions against the United States, not start a war.

This has implications for the discussion of inadvertent escalation, something that has also never occurred. The concern over escalation deserves a longer discussion, as there are both technological and strategic constraints that shape and limit risk in cyber operations, and the absence of inadvertent escalation suggests a high degree of control for cyber capabilities by advanced states. Attackers, particularly among the United States’ major opponents for whom cyber is just one of the tools for confrontation, seek to avoid actions that could trigger escalation.

The United States has two opponents (China and Russia) who are capable of damaging cyberattacks. Russia has demonstrated its attack skills on the Ukrainian power grid, but neither Russia nor China would be well served by a similar attack on the United States. Iran is improving and may reach the point where it could use cyberattacks to cause major damage, but it would only do so when it has decided to engage in a major armed conflict with the United States. Iran might attack targets outside the United States and its allies with less risk and continues to experiment with cyberattacks against Israeli critical infrastructure. North Korea has not yet developed this kind of capability.

#### Resilience solves.

Lewis ’20 [James Andrew; 8/17/20; senior vice president and director of the Strategic Technologies Program at the Center for Strategic and International Studies; "Dismissing Cyber Catastrophe," https://www.csis.org/analysis/dismissing-cyber-catastrophe]

One major failing of catastrophe scenarios is that they discount the robustness and resilience of modern economies. These economies present multiple targets and configurations; they are harder to damage through cyberattack than they look, given the growing (albeit incomplete) attention to cybersecurity; and experience shows that people compensate for damage and quickly repair or rebuild. This was one of the counterintuitive lessons of the Strategic Bombing Survey. Pre-war planning assumed that civilian morale and production would crumple under aerial bombardment. In fact, the opposite occurred. Resistance hardened and production was restored.1

#### NC3 impacts are nonsense.

Dr. Andrew Futter 16, Associate Professor of International Politics and Director of Research for Politics and International Relations at the University of Leicester, “War Games Redux? Cyberthreats, US–Russian Strategic Stability, and New Challenges for Nuclear Security and Arms Control”, European Security, Volume 25, Issue 2, p. 171-172

It is of course highly unlikely that either the USA or Russia has plans – or perhaps more importantly, the desire – to fully undermine the other’s nuclear command and control systems as a precursor to some type of disarming first strike, but the perception that nuclear forces and associated systems could be vulnerable or compromised is persuasive. Or as Hayes (2015) puts it, “The risks of cyber disablement entering into our nuclear forces are real”. While the growing possibility of “cyber disablement” should not be overstated (notions of a “cyber-Pearl Harbor” (Panetta 2012) or “cyber 9–11” (Charles 2013) have done little to help understand the nature of the challenge), cyberthreats are nevertheless an increasingly important component of the contemporary US–Russia strategic context. This is particularly the case when they are combined with other emerging military-technical developments and programmes. The net result, especially given the current downturn in US–Russian strategic relations, and the way cyber is exacerbating the impact of other problematic strategic dynamics, is that is seems highly unlikely that either the USA or Russia will make the requisite moves to de-alert nuclear forces that the new cyber challenges appear to necessitate, or for that matter to (re)embrace the “deep nuclear cuts” agenda any time soon.

Assessing the options for arms control and enhancing mutual security

Given the new challenges presented by cyber to both US and Russian nuclear forces and to US–Russia strategic stability, it is important to consider what might be done to help mitigate and guard against these threats, and thereby help minimise the risks of unintentional launches, miscalculation, and accidents, and perhaps create the conditions for greater stability, de-alerting, and further nuclear cuts. While there is unlikely to be a panacea or “magic bullet” that will reduce the risk of cyberattacks on US and Russian nuclear forces to zero – be they designed to launch nuclear weapons or compromise the systems that support them – there are a number of options that might be considered and pursued in order to address these different types of threats and vulnerabilities. None, of these however, will be easy.

The most obvious and immediate priority for both the USA and Russia is working (potentially together) to harden and better protect nuclear systems against possible cyberattack, intrusion, or cyber-induced accidents. In fact, in October 2013 it was announced that Russian nuclear command and control networks would be protected against cyber incursion and attacks by “special units” of the Strategic Missile Forces (Russia Today 2014). Other measures will include better network defences and firewalls, more sophisticated cryptographic codes, upgraded and better protected communications systems (including cables), extra redundancy, and better training and screening for the practitioners that operate these systems (see Ullman 2015). However, and while comprehensive reviews are underway to assess the vulnerabilities of current US and Russian nuclear systems to cyberattacks, it may well be that US and Russian C2 infrastructure becomes more vulnerable to cyber as it is modernised and old analogue systems are replaced with increasingly hi-tech digital platforms. As a result, and while nuclear weapons and command and control infrastructure are likely to be the best protected of all computer systems, and “air gapped”14 from the wider Internet – this does not mean they are invulnerable or will continue to be secure in the future, particularly as systems are modernised or become more complex (Fritz 2009). Or as Peggy Morse, ICBM systems director at Boeing, put it, “while its old it’s very secure” (quoted in Reed 2012).

# 2NR

## 2NC --- Turn --- Dedev

**ICT innovation is key to long term growth**

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Introduction

As the global economy has entered recession in 2020, triggered by the COVID-19 pandemic, the human casualties, and economic **damage** are perceived to be **very large**. Even as the health crisis will gradually become manageable, the impact on economic growth can be **long-lasting** and the recovery path can take several **years**. In particular, growth drivers such as the pace of job creation, income generation and investment may take several years to get back to pre-crisis trends. Initially the productivity of those growth drivers may be of less concern as the mantra of ‘we’ll do what it takes to avoid worse’ is predominant in this phase of the crisis.

However, once the recovery gets underway the **productive** use of **resources** is key to **sustained** growth. While we do not ignore the short-term challenges of the economic recovery, our primary focus in this paper is on the productivity puzzle from a **long-term** perspective. Productivity is driven by technological **change** and **innovation** which, in turn, depends on **investment** in human and physical capital as well as in other ‘missing capitals’ often referred to as intangible assets. Indeed, those investments create a **positive feedback** effect, as the productivity it generates also helps to make more **efficient** usage of **scarce** resources in the future. When properly measured and valued, productivity also provides a critical yardstick to realise a fairer distribution of the gains from economic growth to those who bring the resources to bear. It thereby creates the incentives for people to produce and business to invest helping to drive economic growth and raise living standards.

Unfortunately, in the aftermath of the global financial crisis of 2008/2009, many economies around the world, especially advanced economies, have failed to recharge the economy by powering productivity as the key source of growth in the long term. Indeed the latest update of The Conference Board Total Economy Database (July 2020) points at significant weakening in labor productivity growth in Europe up to 2019 (figure 1a–c). While the United States experienced somewhat faster productivity growth from 2017 to 2019 than the Euro Area and the United Kingdom, it still has **not recovered** to the rates of productivity growth from before the global financial crisis either.

The slowdown in productivity growth over the past 15 years has been well documented. There are multiple causes including an exhaustion of catch-up potential in emerging markets impacting economies along entire global value chains, and the drag from the global financial crisis because of low demand and weak investment, too low interest rates causing misallocations an overreliance on cheap labor, and failing fiscal policies (Bauer et al., 2020; Cette et al., 2016; Crafts, 2018; Dieppe, 2020; Fernald et al., 2017; Syverson, 2016).1 Technical measurement issues regarding inputs and outputs may have played a role as well.

In our earlier work we have stressed the importance of time lags in the adoption of new technologies, and in particular the complexity in generating productivity growth from the latest round of new digital technologies since the early 2010s, including the move toward mobile, ubiquitous access to broadband, the rise of cloud storage and advances in artificial intelligence (AI) and robotics (van Ark, 2016a, 2016b; van Ark and O’Mahony, 2016; van Ark et al., 2016).

While the first priority for economic recovery from the COVID-19 crisis is to restore jobs, it is important that any employment-intensive growth path does go together with a **productivity revival**. In this paper, we argue that it is possible to avoid another productivity **slowdown**. Underneath the aggregate figures, there is evidence pointing toward a possible **tipping point** at which many advanced economies may expect to see more **widespread** impacts from the adoption and absorption of **digital technology** on **productivity** and GDP **growth**.

In Section 2 we review the latest literature on the productivity impacts of general purpose technologies (GPTs), including the notion of time lapses through which digital technologies result in faster productivity growth. We also look at patterns by which innovation and productivity effects GPTs emerge across industries and disperse across the economy. We explain why the New Digital Economy (NDE) is especially characterised by long lag effects.

In Section 3 we provide an empirical analysis of productivity growth by industry data to observe whether we can detect a distinct pattern across groups of industries pointing to a structural improvement in recent years. We use a taxonomy on digital intensity by industry which was recently developed by the Organisation for Economic Co-operation and Development (OECD) (Calvino et al., 2018), showing that the most digital-intensive industries have experienced a relatively strong performance in terms of labor productivity growth since 2007 and especially since 2013.

In Section 4 of the paper, we discuss the connection between labor and skills in the digital economy, which we believe provides the key to a productivity revival. We developed a new metric on innovation competencies by occupation on the basis of data from the O\*Net database on occupation-specific descriptors in the United States (Hao et al., 2018). When applied to the United Kingdom, we find that innovation competencies point at stronger productivity effects by industry.

In Section 5 we focus on how productivity has been behaving in the short-term during the COVID-19 recession. In particular, we address the potential trade-offs between traditional pro-cyclical recovery effects and scarring effects the recession leaves, especially on the labor market. We argue that increased adoption and usage of digital technologies during the COVID-19 crisis may create a positive productivity effect. In the final section, Section 6, we will review our hypothesis that a productivity revival could be imminent in the light of the recovery from the COVID-19 crisis. In order **not to miss** this **opportunity** again, as happened a decade ago, we argue that a coordinated effort from business and policy is needed, and has to be delivered in such a way that the gains from productivity will be more **widespread** and such that those who provide the resources for growth are incentivised to deliver them in an efficient way.

2. The productivity paradox of the New Digital Economy

It is well known that General Purpose Technologies (GPTs), defined as new methods of producing and inventing new goods and services which are important enough to have a long-term aggregate impact on the economy, can take a significant amount of time to translate to faster **productivity** growth at the **aggregate level** of the economy. This is inherent to the three critical characteristics of a GPT as identified by Bresnahan and Trajtenberg (1995).2

1. Pervasiveness –The GPT should spread to most sectors.

2. Improvement –The GPT should get better over time and, hence, should keep lowering the costs of its users.

3. Innovation spawning –The GPT should make it easier to invent and produce new products or processes.

Historical analysis has focussed on productivity trends in previous technology phases (Bakker et al., 2019; Crafts, 2004). Recent literature has shown that the information and communication technology (ICT) revolution of the past 50 years can be characterised as a GPT and doesn’t pale with previous GPTs such as steam technology, electricity and the combustion engine. For example, Hempell (2005) concludes that ‘investment in information and communication technologies (ICT) are **closely linked** to **complementary** innovations and are most **productive** in firms with experience from earlier innovations’. In a more recent analysis of the evolution of the Internet, Simcoe (2015) argues that the modularity of the internet has prevented a **fall** in **return** to **investments** in **innovation** by ‘facilitating low-cost **adaptation** of a shared general-purpose technology to the demands of heterogeneous applications’. In a review of the data, Liao et al. (2016) conclude that:

‘...ICT investment does **contribute** to **productivity** but not in the usual manner –we find a positive (but lagged) ICT effect on technological progress. We argue that for a positive ICT role on growth to actually take place, a period of negative relationship between productivity and ICT investment together with ICT-using sectors’ capacity to learn from the embodied new technology was crucial. In addition, it took a learning period with appropriate complementary co-inventions for the new ICT-capital to become effective and its gains to be realised. Our findings provide **solid**, further **empirical evidence** to support ICT as a general purpose technology’.

#### Slow growth causes economic collapse – speculation and financialization – plan prevents that

Amerman, 16 (Daniel R. Amerman is a Chartered Financial Analyst, author, and speaker, with BSBA and MBA degrees in Finance, and over 30 years of professional financial experience, 10-24-2016, "Does Economic Stagnation Create Dangerous Financial Bubbles? by Daniel Amerman," Daniel Amerman, http://danielamerman.com/articles/2015/StagnantBubblesC.html)//babcii

The Federal Reserve has a seemingly odd fear about the markets that may appear completely upside down to most invesdtors – but this fear is so serious it is helping to determine the Fed's actions, even as it poses a potentially acute risk for investors. As reported in MarketWatch on February 19th, there was a wide ranging discussion at the January, 2015 meeting about if and when to raise interest rates, and this was part of the discussion: "Fed members who supported an early move said they were concerned that holding rates low for too long might lead to asset bubbles." So the Federal Reserve is not raising interest rates in the near term, because the economy is still too fragile and weak to handle interest rates above (effectively) zero percent. Yet what they also fear is that this weak economy will generate stratospheric market prices (i.e. asset bubbles) that could be prone to sudden collapse, which could pose acute risks to the economy, global stability, and investment returns. That may all sound counterintuitive, as it would seem to make sense that a weak economy should naturally lead to weak markets and falling prices, whereas it's a strong and healthy economy that should create rapidly rising market prices. However, as explored by some prominent global economists in the recent e-book, "Secular Stagnation: Facts, Causes and Cures", edited by Coen Teulings and Richard Baldwin, the creation of financial bubbles may indeed be the quite likely and expected result of current government policies around the world for dealing with stagnant economies and persistent unemployment. Indeed, the term "rational bubbles" is used to explain the rational reasons for why weak economic times are particularly likely to create irrational prices that foster financial instability. This then raises an interesting and quite timely question: is the Standard & Poor's 500 stock index above 2,000 and the Dow above 18,000 in spite of still weak economic growth and persistent unemployment problems? Or are stock markets soaring to record levels specifically because of the underlying problems and the government's interventions which attempt to fix those problems? Most investors would likely agree that with stock indexes in record territory, it is critically important to be able to distinguish between whether the source is 1) the rational result of a thriving economy; or instead 2) the kind of financial bubble that can rationally be expected to be created specifically because of a persistently underperforming economy. So let's take a closer look at why it is that struggling economies can be expected to produce irrationally soaring stock markets and other financial bubbles. Secular Stagnation & Bubbles In a previous article, I discussed the general implications of an important new book released by the Centre for Economic Policy Research (CEPR), which suggests that the world has entered a "new normal" of secular stagnation (with secular being economics jargon for long term), with slow economic growth, an indefinite continuation of very low interest rates and – as a matter of deliberate governmental policy – persistent negative investor returns in inflation-adjusted terms. The contributors to "Secular Stagnation" include Lawrence Summers and Paul Krugman, as well as numerous economists from such institutions as Harvard, MIT, Oxford, Cambridge, the International Monetary Fund and also the Principal Economist for the Executive Board of the European Central Bank. However, while the face of secular stagnation is one of sustained and almost inescapable low yields – both for fixed income investors as well as the long-term economic growth which underlies rational stock market valuations – there is a glittering exception to this rule. That is, what concerns these economists is that this environment of sustained very low interest rates combined with few good investment opportunities can be expected to foster the creation of financial bubbles and financial instability. So that in the short term – and possibly even lasting for years – enormous paper wealth is created as a direct result of secular stagnation, until the bubble finally pops (as they always eventually do) at which time enormous economic and financial damage is inflicted on both investors as well as the financial system. The danger is described by Lawrence Summers (Treasury Secretary in the Clinton administration, and former Director of the National Economic Council in the Obama administration) on pages 32-33 of the book. "Low nominal and real interest rates undermine financial stability in various ways. They increase risk-taking as investors reach for yield, promote irresponsible lending as coupon obligations become very low and easy to meet, and make Ponzi financial structures more attractive as interest rates look low relative to expected growth rates. So it is possible that even if interest rates are not constrained by the zero lower bound, efforts to lower them to the point where cyclical performance is satisfactory will give rise to financial stability problems. Something of this kind was surely at work during the 2003–2007 period." Teulings and Baldwin considered the issue of "bubbles and low interest rates" to be one of the key new challenges created by secular stagnation (SecStag), and they devoted the entire third section of their introduction to the matter. The following quotations are from pages 13 and 14. "Beyond ZLB issues, which have been the main concern in the SecStag discussion to date, low real rates can produce bubbles and foster financial instability – as Summers argues forcefully in his chapter. When the real rate, r, falls to values close to the economy’s growth rate, g, asset prices start to explode in a ‘rational’ way (as pointed out by Tirole 1985)." "Bubbles are an alternative way for society to deal with excess saving when fiscal policy does not take up the challenge. Buying bubbly assets with the intention of selling them at a later date is an alternative route of saving for future consumption. When nobody wants to invest because r is below g, and hence buys bubbly assets, the price of these assets goes up, yielding windfall profits to their sellers who are therefore able to increase their consumption. This additional consumption restores the balance between supply and demand for loanable funds on the capital market." "A greater supply of savings is one of the Wicksellian forces pushing the real interest rate down. Hence, ageing societies might run a greater risk of bubbles popping up." To expand upon these brief quotations, there are several interrelated components which can work together in an environment of secular stagnation to create a financial bubble – or a series of financial bubbles. While Central Bank interventions mean there is a large supply of low-cost money available to invest – where does one put it if we're looking at fundamental valuations? Interest rates are very low and are indeed negative on an inflation-adjusted basis as a matter of quite deliberate governmental policy, as further explored here. Economic performance is erratic at best, unable to deliver sustained and powerful economic growth, thereby eliminating much of the fundamentals-based premise for the valuation of stocks. There just don't seem to be any good investment alternatives. Another element – and one of the reasons why some believe that secular stagnation could be our indefinite future – is the globe's aging population, particularly in Europe, and to a lesser extent in the United States. As the population ages, their economic productivity is likely to be falling, even as their consumption which drives future economic growth is also likely to be falling. Simultaneously, they have the largest amounts to invest in their latter years before retirement and in early retirement that they have ever had. So productivity and consumption each fall while investable funds are peaking, thereby exacerbating the problem of a large supply of money seeking homes in what is otherwise a low yield environment. And what happens as a result is that we get upward price movement in a given asset category. As the prices climb upwards, this starts to produce a level of yields that are simply not available anywhere else. These attractive yields bring in new investors, which increases the prices, which then increases the yields while reinforcing the pattern, which in turn brings in the next round of money. This pattern of rising prices drawing in money which fuels further rising prices – until rational valuations have been left far behind – is one of the oldest and most reliable stories in the history of finance and markets. What is different this time around is the ready supply of cheap money, in combination with the lack of fundamental alternatives for investment, along with a large pool of older investors who are desperate for yield alternatives and are seeing attractive yields being created. While it may seem counterintuitive at first, these factors are all accelerants and in combination become the perfect recipe for creating a financial bubble. And as discussed in "Secular Stagnation", these leading economists – whose policy advice is responsible for so many nations around the world adopting very low interest rate policies as an attempted cure for economic stagnation – are also perfectly well aware that these same economic strategies are creating an ideal environment for the creation and feeding of financial bubbles and financial instability. Is Secular Stagnation The Source Of Current Stock Index Highs? Now isn't it fascinating that even as we are six years into a period that many leading economists are now calling a new normal of secular stagnation, we're simultaneously seeing record stock prices with the S&P 500 above the 2,000 level and the Dow Jones above 18,000? (To be more accurate, these are records on a non-inflation-adjusted basis, which is typically how bull markets are presented.) Is this a coincidence, or could currently soaring stock market levels be an example of exactly the type of secular stagnation-created financial bubbles that are expected by these economists? Let's consider what's happening. We have near zero interest rates that are negative in real terms. As has been reported upon time and again, we continue to have persistent high unemployment in the United States when we adjust for workforce participation rates, even while the headlines focus on the partial measure of headline unemployment. The United States may or may not have emerged from the "Great Recession" (it really depends upon whatever inflation rate you're using in the calculation of GDP), but Europe, which is a key trading partner and key component of corporate profits for the United States, continues to struggle to emerge from recession. So we have extraordinary stock valuation levels in a time of still low and unreliable growth, while vast supplies of low cost money flood the financial system as the result of central banking actions. The other remarkable thing that is happening is that there are various major risks developing in the world even while the stock market is surging. As one example, after being briefly held back because of the geopolitical risk associated with the Ukraine in particular, the level of 2,000 for the S&P 500 was reached for the first time the very same week that we had credible evidence for not just one, but potentially two different armored columns of Russian troops being placed in the Ukraine in different locations. Currently we are seeing near record highs even as the election of the far left Syriza party in Greece has created a high risk situation in Europe, as further explored here. Now, as shown in the most recent release of the minutes from the Federal Reserve, the US economy is in their opinion still in such fragile condition that they don't dare raise interest rates in the near term. So we have a weak and fragile economy, even while there is a respectable chance (albeit far from a certainty) that global financial order could be overturned in the coming weeks – and the markets just shrug off those concerns, as prices keep on rising. As another interesting example, record index levels are being reached at the same time that the hacking of electronic payment systems moves from mere novelty to becoming routine, with news emerging in the last year about numerous major corporations having been compromised. Now taking into account that the great majority of the United States economy is based on the electronic flow of money, let me suggest that this new reality of the electronic flow of money from consumers to companies being much more vulnerable than previously recognized – with the exploitation of these vulnerabilities perhaps not entirely coincidentally often coming from predominantly Russian and Eastern European hackers – is an extraordinary threat to potential future profitability. And yet, The Party goes on, creating its own weather pattern that seems near oblivious to these emerging risks. Markets that effortlessly shrug off dangerous developments as if they never happened and just keep on surging are nothing new; it's a well-established pattern that we've seen many times before. But when we put all of these real-world components together, we realize that the sources for the surge in the S&P 500 may be quite different indeed from what the overwhelming voice of The Crowd has been telling us. Which brings to mind a quotation from Charles Mackay, in his classic work "Extraordinary Popular Delusions and The Madness of Crowds": "Men, it has been well said, think in herds; it will be seen that they go mad in herds, while they only recover their senses slowly, and one by one." A Potential Nightmare Scenario For Retirement Investors Once we leave the dry and impersonal language of economics behind and consider the very personal implications for us all, what is being described in the Secular Stagnation e-book is a potential nightmare scenario for society as a whole, and for older investors in particular. As a quite deliberate matter of government policy and as explained here, savers likely face years of negative returns (when adjusted for inflation), because the prevailing view among economists is that forcing negative returns on savers is the best way to fight economic stagnation. So if we stick with conventional investment strategies, there are virtually no yields available unless one either ups the risk or participates in the bubbles that are likely to be created as a direct side-effect of those same stagnation-fighting policies. And if one participates in a bubble then one takes one's chances, because that's the thing about bubbles – you never know when they're going to pop.

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

#### --- More ev

Annunziata and McManus, **19**—former Chief Economist and Head of Business Innovation Strategy at General Electric AND Visiting Research Fellow at Autodesk, Senior Advisor at BCG (Marco and Mickey, “The Great Cognitive Depression,” <https://www.forbes.com/sites/marcoannunziata/2019/01/11/the-great-cognitive-depression/#49ed9dc174c1>, dml)

We have seen a dramatic increase in the amount of complexity that exists in the world. Mickey McManus’s book Trillions noted that as early as 2010, the semiconductor industry had reached the point where they were making more transistors than grains of rice, cheaper. Connectivity has amplified the global amount of aggregate complexity by enabling it to break out of any given domain and spread across the world. The rise of the so called “Internet of Things”—starting with mobile devices and now connected products and vehicles and platforms—is flooding every corner of our homes, factories, and communities. Everything becomes connected—to everything else and to us. The global economy has also become inextricably interconnected; our society is more and more interdependent. Across multiple fields, our knowledge gets deeper and more detailed; we solve old problems and create new ones at accelerating speed. No matter our walk of life, today we are asked to grasp a widening range of increasingly complex issues: climate change, energy policy, advances in health care, the likely impact of robotics and Artificial Intelligence. All these new sources of complexity are increasing the frequency and amplitude of positive and negative feedback loops into crashing waves and a torrential flood. There are no signs of this complexity leveling out, quite the opposite—the waves are getting more erratic and larger and larger. We are standing on the shores of a trillion-node-network tsunami-like event that has never been seen before. Worse this isn’t just a rise of passive information, but also a deluge of active machine agents. When trillions of things not only collect billions of bits of information but also demand our attention and change our environments dynamically on the fly, our ability to think, make decisions and take actions may be on the verge of collapse. The coming together of digital and physical technologies has turned business models upside down and made it even harder for economic analysis to keep up. The “prosumer” concept of the 1980s is back with a vengeance as new technologies allow households to produce electricity and sell it back into the grid, and give them access to manufacturing power with affordable 3D printers. Economists struggle to explain the collapse in productivity that accompanied the latest surge in innovations—and that shows compelling inverse correlation to the rise of connected (and cognitive) devices like mobile phones; their cacophony of explanations ranges from the charge that new digital innovations have no economic value to the claim that they create massive value delivered for free, and hence not recorded in the official statistics. Our ability to think and make smart decisions is eroding just as our environment gets more complex and harder to grasp with our traditional tools. Stone age tools for cognitive age challenges? But wait, this is not the first time we face a rise in complexity and have to contend with multiple disruptions. We’ve faced tough challenges before and built structures to allow us to manage and make decisions at vast scales. Corporations, cities, markets, and governments are all technologies we’ve devised to manage complexity and make rational and actionable decisions in a hostile world. Steven Johnson—in his new book Farsighted—points out that we’ve evolved decision and scenario sciences to cope with increasingly complex issues—from the era of Darwin when he used the simple “pro/con” list to decide if he should get married (a non-trivial decision) to today’s advanced scenario-planning war games, science fiction foresight tools and other scalable management techniques. This time, however, seems different

—for a troubling simple reason. This time we face the rise of powerful new forces that undermine our very ability to react to these challenges and disruptions: our cognition itself is under attack. These toxic new forces leverage digital technology to exploit our behavioral biases, pushed by powerful financial incentives. The early warning signs What if the structures we had built to protect us against irrational decisions turn out to be rickety breakwaters laid down on the shore of a once placid sea and provide no protection from a 100-year flood? When the art and science of decisions-making itself collapses might we face a Great Cognitive Depression? The early warning signs are troubling to say the least. Authoritarian governments and despots are enjoying a resurgence. In many democracies, voters faced with complex issues turn to simple answers and slogans, to the siren call of populism. They dismiss the experts (think of Brexit as a case in point), they look for scapegoats and easy fixes. Could these be examples of human cognition reverting to evolutionary shortcuts to cope with complex threats? Authority bias is a quick way for us to decide things when we are faced with tough choices. If something is too ambiguous or non-deterministic we follow the authority figure with the most compelling and simple story, instead of doing the thinking for ourselves. Social scientists have documented upwards of 200+ cognitive short cuts and biases that evolved to help us cope with danger, make decisions fast, and conserve our precious cognitive resources to fight another day. But sometimes those shortcuts have lived on far past their “sell by” date. Sometimes our brains lie to us. Buying behavior in our simian ancestors seem oddly similar to the ways humans make choices in markets. We believe we are rational actors but time and again we find out that it is very hard to see the thinking about our thinking. And now it’s getting harder. Here is where we find a dangerous market failure. A powerful combination of new technologies and financial incentives is fast overwhelming our old protective barriers. Digital innovations are creating value. But this value is not given away for free, as some economists contend. There is no free lunch. We all know that digital platforms are after our data. Sometimes they use it to our advantage, with more personalized offerings; often they sell it to advertisers. For them we are a different kind of “prosumer”: not a producer-consumer, but rather a product-consumer. We are more a commodity than a true customer. You might argue that well, almost everyone realizes this, and we still enter these transactions of our own free will, so what’s the problem? But digital platforms are not just after our data—they crave our unwavering attention. Higher ratings command higher advertising rates—and the ratings are determined by how much time we spend with our eyeballs glued to the screen, our attention absorbed by the apps. Therefore, these platforms have a financial incentive to hold our attention, and to grab it back whenever it drifts away—a powerful financial incentive. Hence the game of incessant notifications, of addictive updates on likes and shares, of instigations to chase followers, friends and connections. See, the fact that digital platforms grab our data in exchange for their “free” services strikes us as a lesser distortion. The digital platform, be it Google, Amazon, Twitter or Facebook, most likely gets more value from my individual data than it gives back to me in services. But the truth is, my data is much less valuable to me than it is to them, because they can aggregate it with others’, whereas I cannot. And unless I find a way to get together with millions of other users, in a sort of modern trade union of the digital sheep, I will never have enough bargaining power to extract more of that value. Because as long as everybody else gives their data away, the marginal value of my data is close to zero. But as I said, my data is of little value to me, in isolation. Little ventured, little lost in this case. Cognition is another matter. Our attention, our cognition, is a very precious resource. We need it to study, to work, to run our daily lives, to take small and big and life-changing decisions. And it’s a limited resource. We can fool ourselves that we can multitask. That we have become a lot more productive as we track our Twitter feed and social media messages while we work, answer emails during conference calls. Except that we can’t and we don’t. We become less productive, not more. The statistics—as we discussed earlier—bear this out. It should be no surprise. In this more complex world, we have a lot to study and understand—and we cannot do it in 20-seconds bursts. When we get distracted, we need over 20 minutes to refocus on the task at hand. In this more complex and high-tech world, knowledge and understanding have enormous value. The time and cognition we invest in acquiring knowledge, mastering skills, earning credentials, yields a very high rate of return in terms of career opportunities, earnings, and personal fulfillment. Which means that the opportunity cost of every minute we spend looking at a digital ad, “catching up” on various messaging platforms, or watching a viral video is extremely high. And the digital drugs we take on a daily basis not only absorb precious time today—they also erode our ability to concentrate. By pushing us to an obsessive-compulsive habit of constantly checking for something new online, they gradually destroy our slow-thinking ability (àla Kahneman), our power of concentration. Our attention spans are shortening, undermining our future productivity as well. This could easily become a vicious spiral: powerful financial incentives will keep pushing digital platforms to grab more and more of our attention. And as the Internet of Things becomes more pervasive, they will have more and more tools at their disposal: soon the mirror in your bathroom and smart dust around you as you walk down the street will also compete for your attention. At the same time, these companies’ tactics exploit deep-rooted cognitive biases: we are programmed to pay attention to anything referring to us, to look for news and new things, and to crave the approval of our community. Left to itself, this is only going to get worse. So just as we enter the most harrowing straits for ourselves and our planet, as we race to rebalance ever widening gaps between the powerful and the powerless; as we come to grips with extinction level threats to our way of lives, the structures we’ve erected to make rational decisions are collapsing. While we have new decision-making and scenario planning methodologies at our disposal, we may not have much actual brainpower to notice, care or bring our best thinking to the table. The Great Cognitive Depression is racing towards us and we don’t appear to be taking the early warning signs seriously and may not even notice before it’s too late. The counterfeit attention-based currency that is flooding our markets may soon bankrupt our cognitive reserves. Bad money (attention) drives out good, as Gresham’s Law predicts. We’ve fostered the rise of industries that are rewarded for de-cognition attacks and we have put no incentives or taxes in place to do what markets can’t or won’t do themselves. It is as if our human odyssey has been blown off course, pushed by the rising tide toward the land of the sirens, seduced by deceptive songs, hypnotized and driven towards madness. If we do nothing we may ultimately wash up on the shores from a watery grave.

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

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

4.3 Evolving patterns of innovation and limits to assimilable innovation

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

### 2NC --- Sustainability (Read)

#### 1. Inevitable, unpredictable shocks.

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

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

#### Stranded assets.

Cambridge 18, Citing a study conducted by researchers from Cambridge University (UK), Radboud University (NL), the Open University (UK), Macau University, and Cambridge Econometrics (University of Cambridge, June 4th, "'Carbon bubble' coming that could wipe trillions from the global economy: study,” *Phys*, https://phys.org/news/2018-06-carbon-trillions-global-economy.html)

Fossil fuel stocks have long been a safe financial bet. With the International Energy Agency projecting price rises until 2040, and governments prevaricating or rowing back on the Paris Agreement, investor confidence is set to remain high. However, new research suggests that the momentum behind technological change in the global power and transportation sectors will lead to a dramatic decline in demand for fossil fuels in the near future. The study indicates that this will now happen regardless of apparent market certainty or the adoption of climate policies—or lack thereof—by major nations. Detailed simulations produced by an international team of economists and policy experts show this fall in demand has the potential to leave vast reserves of fossil fuels as "stranded assets": abruptly shifting from high to low value sometime before 2035. Such a sharp slump in fossil fuel price could cause a huge "carbon bubble" built on long-term investments to burst. According to the study, the equivalent of between one and four trillion US dollars could be wiped off the global economy in fossil fuel assets alone. A loss of US$0.25 trillion triggered the crash of 2008 by comparison. Publishing their findings today in the journal Nature Climate Change, researchers from Cambridge University (UK), Radboud University (NL), the Open University (UK), Macau University, and Cambridge Econometrics, argue that there will be clear economic winners and losers as a consequence. Japan, China and many EU nations currently rely on high-cost fossil fuel imports to meet energy needs. They could see national expenditure fall and—with the right investment in low-carbon technologies—a boost to Gross Domestic Product (GDP) as well as increased employment in sustainable industries. However, major carbon exporters with relatively high production costs, such as Canada, the United States and Russia, would see domestic fossil fuel industries collapse. Researchers warn that losses will only be exacerbated if incumbent governments continue to neglect renewable energy in favour of carbon-intensive economies. The study repeatedly ran simulations to gauge the outcomes of numerous combinations of global economic and environmental change. It is the first time that the evolution of low-carbon technologies has been mapped from historical data and incorporated into 'integrated assessment modeling'. "Until now, observers mostly paid attention to the likely effectiveness of climate policies, but not to the ongoing and effectively irreversible technological transition," said Dr. Jean-Francois Mercure, study lead author from Radboud University and Cambridge University's Centre for Environment, Energy and Natural Resource Governance (C-EENRG). Prof Jorge Viñuales, study co-author from Cambridge University and founder of C-EENRG, said: "Our analysis suggests that, contrary to investor expectations, the stranding of fossil fuels assets may happen even without new climate policies. This suggests a carbon bubble is forming and it is likely to burst."

#### AI.

OTG ‘18 (Citing the Financial Stability Board; an international body that monitors and makes recommendations about the global financial system. The Board includes all G20 major economies, FSF members, and the European Commission, 2/7/18; “How Artificial Intelligence Triggered The Stock Market Plunge”; *Off The Grid News*; https://www.offthegridnews.com/current-events/how-artificial-intelligence-triggered-the-stock-market-plunge/)

Experts are warning that artificial intelligence (AI) may trigger the next stock market or financial crash – especially in light of Monday’s freefall that was triggered in part by computers. The financial industry’s rush to replace human traders with AI can intensify market shocks and make crashes worse, a panel of financial experts said. “Taken as a group, universal banks’ vulnerability to systemic shocks may grow if they increasingly depend on similar algorithms or data streams,” a November 1 report from the Financial Stability Board (FSB) warned. The FSB is a group of experts that advises central banks like the Federal Reserve and the Bank of England on risks. The FSB is worried about next-generation trading technologies that use advanced software algorithms based on AI and machine learning to make financial decisions, Bloomberg Markets reported. Will AI Take Over Wall Street? “These risks may become more important in the future if AI and machine learning are used for ‘mission-critical’ applications of financial institutions,” the FSB warned. “Moreover, advanced optimization techniques and predictable patterns in the behavior of automated trading strategies could be used by insiders or by cyber-criminals to manipulate market prices.” On Monday the Dow Jones plunged 800 points in about 10 minutes. It ended the day down 1,175 points. “The explosive speed of the fall … that is done by machines,” Tom Stevenson of Investment Director at Fidelity Personal Investing told the BBC. A major fear is that AI might start making trades so fast that humans will be unable to keep up with the process. Another is that hackers or terrorists would be able to sabotage the markets.Artificial intelligence is closer to taking over the financial industry than many people believe. The world’s first hedge fund run by artificial intelligence, Numerai, went online last year. Since then, at least two other efforts to create AI hedge funds, Sharpe Capital and Algo Marketplace, have been proposed. “If computing power and data generation keep growing at the current rate, then machine learning could be involved in 99 percent of investment management in 25 years,” Luke Ellis of the British investment firm Man Group Plc told Bloomberg.

#### Biophysical minimums make consumption inevitable

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

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

### 2NC --- transition

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

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

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

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

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

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

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

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

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

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

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

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

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

Consider a few facts: More than 50% of millennials say they would take a pay cut to find work that matches their values, while 90% want to use their skills for good. And these trends are on the up. Deloitte’s 7th Annual Millennial Survey of 12,000 young people, for example–both millennials and gen Z–reports record low opinions of businesses. Fewer than half now believe that businesses behave ethically, and this directly affects how loyal they feel to their employers; 43% of millennials and a whopping 61% of gen-Zers expect to stay in a job no more than two years. And all this against a backdrop of general public opinion that is also looking increasingly unkindly on the economic paradigm we have.

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

#### 3. Collapse makes that successful – gets everyone else on board.

Samuel Alexander 15, lecturer at the Office for Environmental Programs, University of Melbourne, Sufficiency Economy pg 270-272

In many ways this final ‘pathway’ could be built into all of the previous perspectives, because none of the theorists considered above (especially the DGR camp) would think that the transition to a deep green alternative could ever be smooth, rational, or painless. Even many radical reformers, whose strategy involves working within the institutions of liberal democracy rather than subverting or ignoring them, clearly expect political conflict and economic difficulties to shape the pathway to the desired alternative (Gilding, 2011). Nevertheless, for those who are deeply pessimistic about the likelihood of any of the previous strategies actually giving rise to a deep green alternative (however coherent or well justified they may be), there remains the possibility that some such alternative could arise not by **design** so much as by **disaster**. In other words, it is worth considering whether a crisis situation – or a series of crises – could either (i) **force an alternative way of life** upon us; or (ii) be **the provocation needed** for cultures or politicians to **take radical alternatives seriously**. Those two possibilities will now be considered briefly, in turn. As industrial civilisation continues its global expansion and pursues growth without apparent limit, the possibility of economic, political, or ecological crises forcing an alternative way of life upon humanity seems to be **growing in likelihood** (Ehrlich and Ehrlich, 2013). That is, if the existing model of global development is not stopped via one of the pathways reviewed above, or some other strategy, then it seems clear enough that at some point in the future, industrial civilisation will **grow itself to death** (Turner, 2012). Whether ‘collapse’ is initiated by an ecological tipping point, a financial breakdown of an overly indebted economy, a geopolitical disruption, an oil crisis, or some confluence of such forces, the possibility of collapse or deep global crisis can no longer be dismissed merely as the intellectual playground for ‘doomsayers’ with curdled imaginations. Collapse is a prospect that ought to be taken seriously based on the logic of limitless growth on a finite planet, as well as the evidence of existing economic, ecological, or more specifically climatic instability. As Paul Gilding (2011) has suggested, perhaps it is already too late to avoid some form of ‘great disruption’. Could collapse or deep crisis be the most likely pathway to an alternative way of life? If it is, such a scenario must not be idealised or romanticised. Fundamental change through crisis would almost certainly involve great suffering for many, and quite possibly significant population decline through starvation, disease, or war. It is also possible that the ‘alternative system’ that a crisis produces is equally or even more undesirable than the existing system. Nevertheless, it may be that this is **the only way** a post-growth or post-industrial way of life will **ever arise**. The **Cuban oil crisis**, prompted by the collapse of the USSR, provides one such example of a deep societal transition that arose not from a political or social movement, but from sheer force of circumstances (Piercy et al., 2010). Almost overnight Cuba had a large proportion of its oil supply cut off, forcing the nation to move away from oil-dependent, industrialised modes of food production and instead take up local and organic systems – or **perish**. David Holmgren (2013) published a deep and provocative essay, ‘Crash on Demand’, exploring the idea that a relatively small anti-consumerist movement could be enough to destabilise the global economy, which is already struggling. This presents one means of bringing an end to the status quo by inducing a voluntary crisis, without relying on a mass movement. Needless to say, should people adopt such a strategy, it would be imperative to ‘prefigure’ the alternative society as far as possible too, not merely withdraw support from the existing society. Again, one must not romanticise such theories or transitions. The Cuban crisis, for example, entailed much hardship. But it does **expose the mechanisms** by which crisis can induce **significant societal change** in ways that, in the end, are **not always negative**. In the face of a **global crisis** or **breakdown**, therefore, it could be that elements of the deep green vision (such as organic agriculture, frugal living, sharing, radical recycling, post-oil transportation, etc.) come to be **forced upon humanity**, in which case the question of strategy has **less** to do with **avoiding** a deep crisis or **collapse** (which may be inevitable) and more to do with **negotiating the descent** as wisely as possible. This is hardly a reliable path to the deep green alternative, but it presents itself as a possible path. Perhaps a more reliable path could be based on the possibility that, rather than imposing an alternative way of life on a society through sudden collapse, a deep crisis could provoke a social or political **revolution in consciousness** that **opens up space** for the deep green vision to be **embraced** and **implemented** as some form of crisis management strategy. Currently, there is **insufficient social** or **political support** for such an alternative, but perhaps a **deep crisis** will **shake the world awake**. Indeed, perhaps that is **the only way** to create the **necessary mindset**. After all, today we are hardly lacking in evidence of the need for radical change (Turner, 2012), suggesting that shock and response may be the form the transition takes, rather than it being induced through orderly, rational planning, whether from ‘top down’ or ‘from below’. Again, this ‘nonideal’ pathway to a post-growth or post-industrial society could be built into the other strategies discussed above, adding some realism to strategies that might otherwise appear too utopian. That is to say, it may be that **only deep crisis** will **create the social support** or **political will needed** for radical reformism, eco-socialism, or ecoanarchism to emerge as social or political movements capable of **rapid transformation**. Furthermore, it would be wise to keep an open and evolving mind regarding the best strategy to adopt, because the relative effectiveness of various strategies may change over time, depending on how forthcoming crises unfold.

#### 4. Coronavirus is neg uniqueness – it has started the process of unpatterning, but only sustained disruptions can cause a radical shift toward degrowth

Davey, 20 (Brian Davey, Professor of religion and ecology @ Dublin City College, B.A. in Economics from University of Nottingham and Masters of philosophy, “Coronavirus, Degrowth, and Self Isolation”,Feasta, March 17, 2020, https://www.feasta.org/2020/03/17/coronavirus-degrowth-and-self-isolation/)//babcii

“The human mind is conditioned to look for patterns in order to establish a baseline of normal expectations upon which to plan out future actions. This perceptual framework exists to give us safety and security, so disruptions in the patterns upon which it is based often feel weird, threatening, and scary. They make us feel insecure, because our cognitive tool for staying in control of our wellbeing has a glitch in it.

“When you’re talking about a species that has been consistently patterned towards its own destruction, though, a disruption of patterns is a good thing. Our ecocidal, warmongering tendencies have brought us to a point that now has us staring down the barrel of our own extinction, and that is where we are surely headed if we continue patterning along the behavioral trajectory that we have been on. Only a drastic change of patterns can change that trajectory. And we are seeing a change of patterns.

This great unpatterning is going to continue, in many wild and unexpected ways. And things are going to keep getting stranger.

All of humanity’s problems are the result of our collective conditioning patterns throughout history. Where there is pattern disruption, there is the opportunity for pattern divergence. Where there is movement, there are gaps. Where there are gaps, there is an opportunity for light to get through.”

The point is well made. Although marooned in our own homes, we are all on a journey. For many of us older people it will end in our deaths. For other, mainly younger people it will lead to radical shifts in life direction and purposes. Hopefully support can be found through the internet during this time – giving assistance to think about the new life and career options that younger and healthy people will need to embark on – as well as learning practicalities like growing and cooking for ourselves.

### 2NC --- AT: Smart Cities

#### No smart cities AND they fail.

Smith ‘17 [Kendra; November 17; writer @ wired; Scientific American, “The Inconvenient Truth about Smart Cities,” [https://blogs.scientificamerican.com/observations/the-inconvenient-truth-about-smart-cities]](https://blogs.scientificamerican.com/observations/the-inconvenient-truth-about-smart-cities%5d)

A big reason for the disconnect between smart city potential and reality is the fact that smart cities are where the digital world blends, but can also collide, with the non-digital world. Non-digital issues such as legacy governance, social justice, politics, ideology, privacy and financial elements that are not so smart, efficient or resilient when smart-city planning starts can become large factors. Any one of these elements can pose a challenge in and of itself and grow to monstrous proportions when combined with other longstanding problems in a city. Imagine the entanglements that existing public and private industries must go through to implement a single smart city project, let alone numerous projects such as smart lighting, smart transportation, smart buildings and the like to actually make a more complete smart city. Bill Gates’ effort is notable because Belmont is a blank slate to be built from the ground up.

## A2

### 2NC --- AT: Cyber

#### No cyber war or retaliation

Jasmine Rodet 18, Master’s Degree in Cyber Security, Strategy, and Diplomacy from the University of New South Wales, Cyber Security Program Manager at Fortescue Metals Group, “The Threat of Cyber War is Exaggerated”, 11/11/2018, linkedin.com/pulse/threat-cyber-war-exaggerated-jasmine-rodet/

For the regular person on the street, the term ‘cyber war’ is more likely to bring to mind the 1983 movie “WarGames” and the doomsday articles that appear regularly in the media about the ‘cyber battlefield’ and an impending World War III. This essay argues that the threat of cyber war is exaggerated and although it can, by definition, be stated that we are already in a state of cyber war, the impact on states is negligible compared to conventional war domains.

The argument is presented in 3 steps. The first step is to define cyber war and cyber weapons, referencing scholars and experts in the area of conventional war and the cyber domain. The second step is to explore who has been exaggerating the threat of cyber war and what their motivations might be. The third is to explore the evidence and quantify the probability and impact that cyberwar has had on states to date.

‘Cyber war’ is a term often used interchangeably in media with cyber-crime, cyber-attacks, cyber-conflict and cyber-incidents, creating confusion amongst the public and scholars alike. Clausewitz (1989, 75), in his book, On War, defines war as ‘an act of force to compel the enemy to do our will’. Rid (2012, 7) on the other interprets Clausewitz use of ‘force’ as meaning ‘violent’ force. According to Rid, if an act is not potentially violent, it is not an act of war. However, Stone (2013, 107) describes ‘cyber war’ as a politically motivated act of force, not necessarily lethal and not necessarily attributable. The definition by Powers and Jablonski states more simply that cyber war is the utilisation of digital networks for geopolitical purposes (Nocetti 2016, 464). Neither of the latter two definitions requires violence to qualify as cyber war. Under these definitions, the Stuxnet cyber-incident in 2010 and the Estonia incident in 2007 would constitute an act of cyber war, and as such we could say that nations have been at cyber war in the past and are likely to continue to engage in cyber war in years to come.

For this essay, I will use Stones definition to argue that even though states may engage in cyber war, the concept of cyber war is exaggerated. It seems that cyber war is deliberately exaggerated in the media and by politicians for financial and political gains. There are countless examples in the media and in politics of the exaggeration of the threat of cyber war and the language used plays a big factor in creating a sense of fear in the community.

The Four Corners report, Hacked, is a classic example where the reporter, Andrew Fowler describes the current situation in Australia as ‘… a secret war where the body count is climbing every day’ (Fowler 2013). The documentary reveals nothing violent or lethal about cyber incidents. The documentary is actually about hackers working from locations overseas, having targeted key Federal Government departments and major corporations in Australia.

In another example, NATO may be interpreted as exaggerating the threat of Cyber War when they invited Charlie Millar to present at their Conference for Cyber Conflict at the NATO Cooperative Cyber Defence Centre of Excellence in 2017. Millar is an independent security evaluator, and his presentation was titled ‘Kim Jong-il and me: How to build a cyber army to attack the US’. He later presented similar content at Def Con 2018. His presentation described the steps he would take to mount a cyber war, including the types of people he would engage, how much he would pay them, what his strategy would be and how much it would cost in total.

Who stands to gain from the exaggeration and hype? Logically, one group would be those that gain financially from the sale of cyber protective services and software. According to Valerino, 57% of technical experts surveyed said that we are currently in a cyber arms race and 43% said that the worst-case scenarios are inevitable (Valeriano and Ryan 2015). Translate this into sales and Gartner projects worldwide security spending will reach $96 Billion in 2018, up 8 Percent from 2017 and to top $113 billion by 2020 (Gartner 2017).

Additionally, there may be political motivations to exaggerate the threat of cyber war. Cyberspace is not well understood by the general public and fear is natural. In the US’s cyber security debate, observers have noted there is a tendency for policymakers, military leaders, and media, among others, to use frightening ‘cyber-doom scenarios’ when making a case for action on cyber security (Dunn 2008, 2).

There is some evidence to suggest that more recently in the political arena; we may be maturing in our understanding of the real threat of cyber war. The Tallinn Manual, an academic, non-binding study on how international law applies to cyber conflicts and cyber warfare, was written at the invitation of the Tallinn-based NATO Cooperative Cyber Defence Centre of Excellence. It was first published in 2013 with the title ‘The Tallinn Manual on the International Law of Cyber War’. In 2017, it was re-released with the revised title ‘Tallinn Manual 2.0 on the International Law of Cyber Operations’. The change in title from ‘war’ to ‘operations’ signifies a more moderate use of language from NATO and is an acknowledgement that cyber incidents generally fall below the threshold at which International Law would declare them to be a formal act of war. Experience over the 4 short years from 2013 to 2017 has demonstrated that cyber incidents tend to have a low-level impact on the target state. As the book’s authors put it ‘the focus of the original Manual was on the most severe cyber operations, those that violate the prohibition of the use of force in international relations, entitle states to exercise the right of self-defence, and/or occur during armed conflict’ while the new version ‘adds a legal analysis of the more common cyber incidents that states encounter on a day-to-day basis and that fall below the thresholds of the use of force or armed conflict’ (Leetaru 2017).

To get a better sense if cyber war is exaggerated, we must also consider the probability of cyber war in the future. The probability of cyber war should be weighed up against the probability of conventional war. Where tensions are already high, for example, between North Korea and the US or Russia and Estonia, I would argue that cyber war is more likely than conventional war. This is due to factors including; cyber warfare is less costly than conventional warfare, states are less rational in their decision space in the cyber realm, states find cyber attribution very difficult to achieve so attacks can be undertaken covertly and cyber war is considered ‘a challenge’ and central to the hackers’ ethos (Junio 2013, 128). Further, Sanger describes in his book, The Perfect Weapon, cyber weapons (such as cyber vandalism, Distributed Denial of Service (DDOS), intrusions and advanced persistent threat (APT)) as the ‘perfect weapons’ for the following reasons;

They are cheap: When compared to Nuclear weapons, there are only a handful of nations globally that can afford the technology to create a nuclear weapon.

They are easily accessible: Unlike a Nuclear bomb that requires uranium, a highly protected metal, in the production process, a cyber weapon can be created with minimal investment and highly available IT infrastructure.

They can be dialled-up or dialled-down relatively easily. A ballistic missile, the force of the explosion cannot be adjusted as easily as a DDOS attack. A DDOS attack can be adjusted to last an hour, a few days or a few weeks.

They have a huge range in how they are used: Sabotage as with Stuxnet, Espionage as with the Chinese industrial spying on the US, North Korea’s infiltration of Sony, the Iranians attack on Las Vegas Sands Corp. casino operators.

The significant factor is that cyber weapons can and are being used every day for discrete, low-level cyber conflicts to undermine and disrupt rivals, but historically it has not progressed to open conflict, nor has it warranted a military response (Sanger 2018). Additionally, massive cyber operations would necessarily impact the civilian population and violate the immunity of non-combatants. The conditions of war dictate that this is “taboo” and to date, rival states have shown restraint in their use of cyber weapons for this reason (Valeriano and Ryan 2015). It appears that the threat that cyber weapons represent to national security is overstated and the threat of cyber war is overstated.

The US and likely other highly networked nations appear reticent about using cyber weapons for significant cyber conflict given their vulnerabilities. Ironically, NSA programs such as PRISM have made the US more of a target given the sheer volume of sensitive information stored in one place. Regardless of US defences, there is no way to make this information completely secure from intrusion, and as such, the very act of storing the information makes them more vulnerable.

Rid (2012) is among some academics who argue that cyber war has never and will likely never eventuate. The benefits of being on this side of the debate mean that public funding can be allocated away from offensive cyber security initiatives to other, potentially more important initiatives, such as public health and housing. The government is constantly under pressure to prioritise public spending and it is imperative that they have realistic, accurate projections regarding the risk of cyber war, the probability and the impact, to allow them to focus spending on the most important areas.

### 2NC – Grid

#### The grid is safe.

Larson 18 Selena Larson, Cyber threat intelligence analyst at Dragos, Inc. [Threats to Electric Grid are Real; Widespread Blackouts are Not, 8-6-2018, https://dragos.com/blog/industry-news/threats-to-electric-grid-are-real-widespread-blackouts-are-not/]

The US electric grid is not about to go down. Though it’s understandable if someone believed that. Over the last few weeks, numerous media reports suggest state-backed hackers have infiltrated the US electric grid and are capable of manipulating the flow of electricity on a grand scale and cause chaos. Threats against industrial sectors including electric utilities, oil and gas, and manufacturing are growing, and it’s reasonable for people to be concerned. But to say hackers have invaded the US electric grid and are prepared to cause blackouts is false. The initial reporting stemmed from a public Department of Homeland Security (DHS) presentation in July on Russian hacking activity targeting US electric utilities. This presentation contained previously-reported information on a group known as Dragonfly by Symantec and which Dragos associates to activity labeled DYMALLOY and ALLANITE. These groups focus on information gathering from industrial control system (ICS) networks and have not demonstrated disruptive or damaging capabilities. While some news reports cite 2015 and 2016 blackouts in Ukraine as evidence of hackers’ disruptive capabilities, DYMALLOY nor ALLANITE were involved in those incidents and it is inaccurate to suggest the DHS’s public presentation and those destructive behaviors are linked. Adversaries have not placed “cyber implants” into the electric grid to cause blackouts; but they are infiltrating business networks – and in some cases, ICS networks – in an effort to steal information and intelligence to potentially gain access to operational systems. Overall, the activity is concerning and represents the prerequisites towards a potential future disruptive event – but evidence to date does not support the claim that such an attack is imminent. The US electric grid is resilient and segmented, and although it makes an interesting plot to an action movie, one or two strains of malware targeting operational networks would not cause widespread blackouts. A destructive incident at one site would require highly-tailored tools and operations and would not effectively scale. Essentially, localized impacts are possible, and asset owners and operators should work to defend their networks from intrusions such as those described by DHS. But scaling up from isolated events to widespread impacts is highly unlikely.

# 1NR

## Sua-Sponte DA

#### Here is the distinction

Davis and Morse ’18 [Christina and Julia; September 19; Professor of Government at Harvard University; Professor of Political Science at the University of California at Santa Barbara; International Studies Quarterly, “Protecting Trade by Legalizing Political Disputes: Why Countries Bring Cases to the International Court of Justice,” vol. 62]

**Trade**, Conflict, **and Adjudication** We argue that countries turn to international adjudication to protect trade flows under conditions of strong economic interdependence. This argument is built on two key assumptions. First, states believe that an international dispute over territory, fishing rights, or another salient issue could harm trade. Second, states view international adjudication as an effective way to end the dispute. Given the risk of harm to economic relations and the potential for courts to contribute to conflict resolution, states with high trade value vested in a relationship will be more willing to undertake costly litigation. This section elaborates on the general conditions of our theory and then explains why the ICJ is a good venue for testing the relationship between economic interdependence and international adjudication. The Adverse Impact of Conflict on Trade The premise that conflict disrupts trade is central to the theory of commercial peace. Russett and Oneal (2001) draw on the work of philosopher Immanuel Kant to argue that interdependence deters conflict by raising its costs. According to this reasoning, war interrupts trade while peace promotes stable commerce, leading states to calculate that the gains of peace are significant compared to the costs of war.4 Other perspectives focus on the informational role of interdependence to lower uncertainty between states (Reed 2003). Gartzke, Li, and Boehmer (2001) contend economic interdependence allows states to signal their resolve through their willingness to bear the economic costs of confrontation.5 A host of empirical studies supports the idea that conflict reduces trade (Keshk, Reuveny, and Pollins 2004; Long 2008). Several potential channels connect trade and conflict, including direct damage to infrastructure and transportation resulting from actual conflict, sanctions policies, and informal discrimination by governments or private actors. Glick and Taylor (2010) find that the effect of war on trade is significant and persistent. At a lower level, political tensions may also suppress trade (Pollins 1989; Fuchs and Klann 2013). Consumer boycotts and financial market reactions in some cases have led to adverse market impact (Fisman, Hamao, and Wang 2014; Heilmann 2016; Pandya 2016). Simmons (2005) finds that territorial disputes have a sizable negative impact on trade even in the absence of militarized action. Others suggest states anticipate the potential adverse impact of conflict on trade, and therefore trade less to begin with if they think that war is likely. In such a scenario, the marginal economic costs of war should be insufficient to change a state's calculation for going to war (Morrow 1999; Barbieri 2002). Gowa and Hicks (2017) contend that trade is largely diverted through third-party channels, which compensate for having less direct trade with the adversary. We assume that leaders and business constituencies on average believe that conflict damages trade relations. Political conflict could lead governments to adopt sanctions against an adversary or to restrict financial flows. Violence likely disrupts trading routes and slows the movement of goods. The potential for adverse financial market reactions and consumer response adds further unpredictability about the risk of spillover from political disagreement into economic harm. Substitution through third parties could alleviate the harm, but this would still increase trade costs. The expected harm to trade motivates states to pursue the resolution of disputes. **Adjudication as a Conflict Resolution Mechanism** When states want to resolve an interstate dispute, why would they choose adjudication rather than negotiations, economic sanctions, or militarized action? In some cases, the decision follows an episode of military conflict as part of an effort to normalize relations. In other disputes, countries may turn to a legal venue to prevent a problem from ever reaching the stage that could produce serious political tensions or threats of force. The literature offers three broad types of explanations for why states pursue adjudication: legitimacy, informational benefits, and domestic obstacles to settlement. At the systemic level, international norms support peaceful conflict resolution. Some contend that rule of law has come to shape the identities of states, forming norms about appropriate action in both the domestic and international spheres (Finnemore and Sikkink (1998, 902). When international law has been established through fair procedures and offers coherent principles, it forms a legitimate source of authority in international affairs that generates an independent “compliance pull” on state behavior (Franck 1990, 65). International courts combine both legitimacy and authority as they help states solve specific disputes about how to interpret international law; the growing role for international courts in international affairs represents an important trend (Alter 2014; Alter, Helfer, and Madsen 2016). Integration with national courts has reinforced states’ use of the European Court of Justice (ECJ), which stands out for its expansive caseload and impact on state behavior (Alter 1998). The ICJ has achieved a relatively strong record of compliance with rulings (Schulte 2004; Llamzon 2007; Mitchell and Hensel 2007; Johns 2012). Legal settlement can help states coordinate policies through the provision of information. Compared to bilateral negotiations or nonbinding third-party arbitration, adjudication conveys a government's willingness to reach an agreement (Helfer and Slaughter 2005; Gent and Shannon 2010). Having taken the public step to initiate legal action, a government would appear inconsistent and incur a reputational penalty if it also took unilateral measures such as sanctions or military actions before the legal process had reached a conclusion. This shapes the diplomatic context because participants know that the matter will neither escalate into violence nor disappear through neglect. A court ruling offers a focal point amidst uncertainty about how to interpret the terms of an agreement (Ginsburg and McAdams 2004; Huth, Croco, and Appel 2011). As the record-keeper of past actions, courts support systems of tit-for-tat and reputational enforcement (Milgrom, North, and Weingast 1990; Carrubba 2005; Mitchell and Hensel 2007). In these informational theories of courts, states may comply with court rulings in the absence of coercive measures or the threat of sanctions because the reputational costs of noncompliance are too high. Rather than simply interpret law, courts coordinate expectations about enforcement. Johns (2012) models the circumstances whereby mobilization of third-party actions in support of a court ruling generates endogenous enforcement that can affect outcomes. In this way, multilateral enforcement makes an international court different from the pressure available in bilateral negotiations. International courts also offer a way for states to frame settlements to appeal to domestic audiences (Fang 2008). Simmons notes that even when the same deal could be reached in negotiations or through a court decision, a negotiated settlement could be viewed as a sign of weakness while legal resolution would be a positive signal for future cooperation (Simmons 2002, 834). This dynamic occurs because “domestic groups will find it more attractive to make concessions to a disinterested institution than to a political adversary” (Simmons 2002, 834). In research on several prominent ICJ cases, Fischer (1982, 271) emphasizes the court has helped governments to save face. Consequently, those governments unable to reach agreements over domestic opposition may find it easier to do so with the involvement of a third-party ruling. Allee and Huth (2006a) show that governments with higher levels of domestic political constraints are more likely to choose adjudication over negotiation for settling territorial disputes. Domestic political constraints also increase the probability of filing complaints at the WTO (Davis 2012). The mobilization of domestic groups plays a critical role in litigation patterns at the ECJ (Alter and Vargas 2000).a

## T --- Courts

### 2NC --- C/I

#### 2. ‘Prohibitions’ must be legislative enactments

Benjamin Hill 7, Judge on the Georgia Appeals Court, “Rose v. State”, Court of Appeals of Georgia, 1 Ga. App. 596, 601-602, 58 S.E. 20, 22-23, 1907 Ga. App. LEXIS 47, 4/11/1907

The words "otherwise prohibited," relied on by the State, really mean nothing in this statute. When the legislature used the words "prohibited by law," it exhausted the subject, and the addition of the words "high license or [\*\*\*11] otherwise" was "wasteful and ridiculous excess." These general words are sometimes added to specific enumeration in statutes out of abundance of caution, but they usually mean nothing. Certainly such words must be "restricted to the same genus as the things enumerated," and the use of the word "otherwise," following the words "prohibited by law," meant that the "otherwise" prohibition of the sale of liquor was to be a legal prohibition, that is, prohibited by the law of high license, or otherwise prohibited by law. But we do not think this general word means anything in this statute. Whatever it was intended to mean, it could not by any rule of logic give to the failure of the commissioners to grant licenses the force and effect of a positive enactment prohibiting the sale. The word "prohibit" is an active, transitive verb. As defined by the Standard Dictionary, it means "to forbid, especially by authority or legal enactment; interdict; as, to prohibit liquor-selling, or a person from selling liquor." The word "prohibit," [\*\*23] in its legal sense, implies some legislative enactment forbidding something. "The laws of England, from the early Plantagenets, sternly prohibited the [\*\*\*12] conversion of malt into alcohol." "Prohibition," in the United States, specifically means "the forbidding [\*602] by legislative enactment of the manufacture and sale of alcoholic liquors for use as beverage." Giving, therefore, to the word "prohibited" its ordinary signification and its technical meaning, as applied to the particular subject-matter of the sale of spirituous liquors, it must involve some positive act done by authority.

#### 3. AND “the scope of antitrust law” is not governed by court action

**Utah Law Review, 63** (Utah Law Review, Leading law review for the university of Utah, 1963, accessed on 7-20-2021, Utah Law Review, "CASES NOTED" “GOVERNMENT CONTEMPT ORDER PROVIDES POSSIBLE PRIMA FACIE CASEFOR PRIVATE ANTITRUST ACTION", https://collections.lib.utah.edu/dl\_files/e6/34/e6346be7b172efa1c6d32d6e15d4f5094339c121.pdf)//Babcii

It does not, however, necessarily follow that the same is true for the purposes of a private litigant. It must be recognized that the private litigant's rights exist only by virtue of section 5. The term "antitrust laws" has been narrowly construed to **include only** the **statutory provisions** of the Sherman and Clayton Acts **and to exclude other** statutes which apply **broad antitrust policies** to specific segments of business. 22 If this interpretation be accepted, it is arguable that the term "antitrust laws" as used in section 5 excludes antitrust decrees on which the contempt violation was based. 23 Further, the statutory language here involved, "a final **judgment or decree** . . . rendered . . . under the antitrust laws to the effect that a defendant has violated said laws . . ." does not bear out the interpretation given the section by the instant court. From the literal language of the section it would appear that the complaint in the instant case was based upon a criminal contempt citation brought for violation of a court order and not for violation of the antitrust laws. In a similar case, another Federal District Court stated that "**the term 'antitrust laws' could not be construed as** pertaining to a judgment or decree entered by **a court** in connection with an antitrust case." 24

#### 4. AND Resolved implies a legislative instrument

LA House 5 (Lousiana House of Representatives, <http://house.louisiana.gov/house-glossary.htm>)

Resolution A legislative instrument that generally is used for making declarations, stating policies, and making decisions where some other form is not required. A bill includes the constitutionally required enacting clause; a resolution uses the term "resolved". Not subject to a time limit for introduction nor to governor's veto. ( Const. Art. III, §17(B) and House  Rules 8.11 , 13.1 , 6.8 , and 7.4)

### 2NC --- AT --- Arbitrary/Precision

#### 4. Here is contextual ev --- “Expanding the scope of antitrust laws” is separate from judicial rulings

Kuntz 21 – JD candidate at the University of Maryland. Kendall Kuntz, “Can the Courts and New Antitrust Laws Break Up Big Tech?” *Journal of Business and Technology Law*, 23 February 2021, https://www.law.umaryland.edu/Programs-and-Impact/Business-Law/JBTLOnline/Break-Up-Big-Tech/.

If you have a social media profile on Facebook, have shopped online on Amazon, have run a search on Google, or have purchased an application through Apple's App Store, you have interacted with Big Tech. Big Tech refers to the major technology companies including Apple, Google, Amazon, and Facebook. Big Tech is known for its dominance in online searching, advertising, social networking, and shopping, but in 2020, a great deal of its publicity surrounded an investigation by Congress for violations of antitrust law. For years, Big Tech has been using its power to suppress market competition and engage in “take it or leave it” business negotiations, thereby evading antitrust regulation that is “overwhelmingly focused on the welfare of the consumer." The United States Government has begun the process of attempting to break up Big Tech by filing a flurry of lawsuits against Big Tech, including against Google and Facebook, and by proposing legislation aimed at checking Big Tech power, expanding the scope of current antitrust laws, and augmenting enforcement resources.