# 1NC --- Swing 2 R4

## OFF

### OFF

#### 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 says interpret --- That is solely a function of the courts

White House, ND (White House, No Date, accessed on 11-6-2021, The White House, "The Judicial Branch | The White House", <https://www.whitehouse.gov/about-the-white-house/our-government/the-judicial-branch/>)//babcii

Federal **courts enjoy the sole power to interpret the law**, determine the constitutionality of the law, and apply it to individual cases. The courts, like Congress, can compel the production of evidence and testimony through the use of a subpoena. The inferior courts are constrained by the decisions of the Supreme Court — once **the Supreme Court interprets a law**, inferior courts must apply the Supreme Court’s interpretation to the facts of a particular case.

#### 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

### OFF

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

#### 1---“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>

#### 2---“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 patent thickening and hopping

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

### OFF

#### The United States Federal Government should expand the scope of core antitrust law to eliminate patent-tying arrangements involving seeds only if the president determines it does not pose a direct threat to national defense or preparedness programs

#### The counterplan maintains DPA authority --- the plan eliminates it.

Michael H. Cecire and Heidi M. Peters 20. Michael H. Cecire, Analyst in Intergovernmental Relations and Economic Development Policy. Heidi M. Peters, Analyst in U.S. Defense Acquisition Policy. “The Defense Production Act of 1950: History, Authorities, and Considerations for Congress” Updated March 2, 2020. https://www.everycrsreport.com/reports/R43767.html

Authorities Under Title VII of the DPA

Title VII of the DPA contains various provisions that clarify how DPA authorities should and can be used, as well as additional presidential authorities. Some significant provisions of Title VII are summarized below.

Special Preference for Small Businesses

Two provisions in the DPA direct the President to accord special preference to small businesses when issuing contracts under DPA authorities. Section 701 reiterates89 and expands upon a requirement in Section 108 of Title I directing the President to "accord a strong preference for small business concerns which are subcontractors or suppliers, and, to the maximum extent practicable, to such small business concerns located in areas of high unemployment or areas that have demonstrated a continuing pattern of economic decline, as identified by the Secretary of Labor."90

Definitions of Key Terms in the DPA

The DPA statute historically has included a section of definitions.91 Though national defense is perhaps the most important term, there are additional definitions provided both in current law and in E.O. 13603.92 Over time, the list of definitions provided in both the law and implementing executive orders has been added to and edited, most recently in 2009, when Congress added a definition for homeland security93 to place it within the context of national defense.94

Industrial Base Assessments

To appropriately use numerous authorities of the DPA, especially Title III authorities, the President may require a detailed understanding of current domestic industrial capabilities and therefore need to obtain extensive information from private industries. Under Section 705 of the DPA, the President may "by regulation, subpoena, or otherwise obtain such information from ... any person as may be necessary or appropriate, in his discretion, to the enforcement or the administration of this Act [the DPA]."95 This authority is delegated to the Secretary of Commerce in E.O. 13603.96 Though this authority has many potential implications and uses, it is most commonly associated with what the DOC's Bureau of Industry and Security calls "industrial base assessments."97 These assessments are often conducted in coordination with other federal agencies and the private sector to "monitor trends, benchmark industry performance, and raise awareness of diminishing manufacturing capabilities."98 The statute requires the President to issue regulations to insure that the authority is used only after "the scope and purpose of the investigation, inspection, or inquiry to be made have been defined by competent authority, and it is assured that no adequate and authoritative data are available from any Federal or other responsible agency."99 This regulation has been issued by DOC.100

Voluntary Agreements

Normally, voluntary agreements or plans of action between competing private industry interests could be subject to legal sanction under anti-trust statutes or contract law. Title VII of the DPA authorizes the President to "consult with representatives of industry, business, financing, agriculture, labor, and other interests in order to provide for the making by such persons, with the approval of the President, of voluntary agreements and plans of action to help provide for the national defense."101 The President must determine that a "condition exists which may pose a direct threat to the national defense or its preparedness programs"102 prior to engaging in the consultation process. Following the consultation process, the President or presidential delegate may approve and implement the agreement or plan of action.103 Parties entering into such voluntary agreements are afforded a special legal defense if their actions within that agreement would otherwise violate antitrust or contract laws.104 Historically, the National Infrastructure Advisory Council noted that the voluntary agreement authority has been used to "enable companies to cooperate in weapons manufacture, solving production problems and standardizing designs, specifications and processes," among other examples.105 It could also be used, for example, to develop a plan of action with private industry for the repair and reconstruction of major critical infrastructure systems following a domestic disaster.

The authority to establish a voluntary agreement has been delegated to the head of any federal department or agency otherwise delegated authority under any other part of E.O. 13603.106 Thus, the authority could be potentially used by a large group of federal departments and agencies. Use of these voluntary agreements is tracked by the Secretary of Homeland Security,107 who is tasked under E.O. 13603 with issuing regulations that are required by law on the "standards and procedures by which voluntary agreements and plans of action may be developed and carried out."108 The Federal Emergency Management Agency (FEMA), which at the time was an independent agency and tasked with these responsibilities under the DPA, issued regulations in 1981 to fulfill this requirement.109 FEMA is now a part of DHS, and those regulations remain in effect.

The Maritime Administration (MARAD) of the U.S. Department of Transportation manages the only currently established voluntary agreements in the federal government, the Voluntary Intermodal Sealift Agreement (commonly referred to as "VISA") and the Voluntary Tanker Agreement. These programs are maintained in partnership with the U.S. Transportation Command of DOD, and have been established to ensure that the maritime industry can respond to the rapid mobilization, deployment, and transportation requirements of DOD. Voluntary participants from the maritime industry are solicited to join the agreements annually.110

Nucleus Executive Reserve

Title VII of the DPA authorizes the President to establish a volunteer body of industry executives, the "Nucleus Executive Reserve," or more frequently called the National Defense Executive Reserve (NDER).111 The NDER would be a pool of individuals with recognized expertise from various segments of the private sector and from government (except full-time federal employees). These individuals would be brought together for training in executive positions within the federal government in the event of an emergency that requires their employment. The historic concept of the NDER has been used as a means of improving the war mobilization and productivity of industries.112

The head of any governmental department or agency may establish a unit of the NDER and train its members.113 No NDER unit is currently active, though the statute and E.O. 13603 still provide for this possibility. Units may be activated only when the Secretary of Homeland Security declares in writing that "an emergency affecting the national defense exists and that the activation of the unit is necessary to carry out the emergency program functions of the agency."114

Authorization of Appropriations, as amended by P.L. 113-72

Appropriations for the purpose of the DPA are authorized by Section 711 of Title VII.115 Prior to the P.L. 113-172, "such sums as necessary" were authorized to be appropriated. This has been replaced by a specific authorization for an appropriation of $133 million per fiscal year and each fiscal year thereafter, starting in FY2015, to carry out the provisions and purposes of the Defense Production Act.116

Table 1 shows that the annual average appropriation to the DPA Fund between FY2010 and FY2019 was $109.1 million,117 with a high of $223.5 million in FY2013 and a low of $34.3 million in FY2011. Monies in the DPA Fund are available until expended, so annual appropriations may carry over from year to year if not expended. Recently, the only regular annual appropriation for the purposes of the DPA has been made in the DOD appropriations bill, though appropriations could be made in other bills directly to the DPA Fund (or transferred from other appropriations).

Committee on Foreign Investment in the United States118

The Committee on Foreign Investment in the United States (CFIUS) is an interagency committee that serves the President in overseeing the national security implications of foreign investment in the economy. It reviews foreign investment transactions to determine if (1) they threaten to impair U.S. national security; (2) the foreign investor is controlled by a foreign government; or (3) the transaction could affect homeland security or would result in control of any critical infrastructure that could impair the national security. The President has the authority to block proposed or pending foreign investment transactions that threaten to impair the national security.

CFIUS initially was created and operated through a series of Executive Orders.119 In 1988, Congress passed the "Exon-Florio" amendment to the DPA, granting the President authority to review certain corporate mergers, acquisitions, and takeovers, and to investigate the potential impact on national security of such actions.120 This amendment codified the CFIUS review process due in large part to concerns over acquisitions of U.S. defense-related firms by Japanese investors. In 2007, amid growing concerns over the proposed foreign purchase of commercial operations of six U.S. ports, Congress passed the Foreign Investment and National Security Act of 2007 (P.L. 110-49) to create CFIUS in statute.

On August 13, 2018, President Trump signed into law new rules governing national security reviews of foreign investment, known as the Foreign Investment Risk Review Modernization Act (FIRRMA, Title XVII, P.L. 115-235).121 FIRRMA amends several aspects of the CFIUS review process under Section 721 of the DPA.122 Notably, it expands the scope of transactions that fall under CFIUS' jurisdiction. It maintains core components of the current CFIUS process for evaluating proposed or pending investments in U.S. firms, but increases the allowable time for reviews and investigations. Upon receiving written notification of a proposed acquisition, merger, or takeover of a U.S. firm by a foreign investor, the CFIUS process can proceed potentially through three steps: (1) a 45-day national security review; (2) a 45-day maximum national security investigation (with an option for a 15-day extension for "extraordinary circumstances"); and (3) a 15-day maximum Presidential determination. The President can exercise his authority to suspend or prohibit a foreign investment, subject to a CFIUS review, if he finds that (1) "credible evidence" exists that the foreign investor might take action that threatens to impair the national security; and (2) no other laws provide adequate and appropriate authority for the President to protect national security. FIRRMA shifts the filing requirement for foreign investors from voluntary to mandatory in certain cases, and provides a two-track method for reviewing certain investment transactions. Other changes mandated by FIRRMA would provide more resources for CFIUS, add new reporting requirements, and reform export controls.

Termination of the Act

Title VII of the DPA also includes a "sunset" clause for the majority of the DPA authorities. All DPA authorities in Titles I, III, and VII have a termination date, with the exception of four sections.123 As explained in Section 717 of the DPA, the sections that are exempt from termination are

* 50 U.S.C. §4514, Section 104 of the DPA that prohibits both the imposition of wage or price controls without prior congressional authorization and the mandatory compliance of any private person to assist in the production of chemical or biological warfare capabilities;
* 50 U.S.C. §4557, Section 707 of the DPA that grants persons limited immunity from liability for complying with DPA-authorized regulations;
* 50 U.S.C. §4558, Section 708 of the DPA that provides for the establishment of voluntary agreements; and
* 50 U.S.C. §4565, Section 721 of the DPA, the so-called Exon-Florio Amendment, that gives the President and CFIUS review authority over certain corporate acquisition activities.

P.L. 115-232 extended the termination date of Section 717 from September 30, 2019, to September 30, 2025. In addition, Section 717(c) provides that any termination of sections of the DPA "shall not affect the disbursement of funds under, or the carrying out of, any contract, guarantee, commitment or other obligation entered into pursuant to this Act" prior to its termination. This means, for instance, that prioritized contracts or Section 303 projects created with DPA authorities prior to September 30, 2025, would still be executed until completion even if the DPA is not reauthorized. Similarly, the statute specifies that the authority to investigate, subpoena, and otherwise collect information necessary to administer the provisions of the act, as provided by Section 705 of the DPA, will not expire until two years after the termination of the DPA.124 For a chronology of all laws reauthorizing the DPA since inception, see Table A-4.

Defense Production Act Committee

The Defense Production Act Committee (DPAC) is an interagency body originally established by the 2009 reauthorization of the DPA.125 Originally, the DPAC was created to advise the President on the effective use of the full scope of authorities of the DPA. Now, the law requires DPAC to be centrally focused on the priorities and allocations authorities of Title I of the DPA.

The statute assigns membership in the DPAC to the head of each federal agency delegated DPA authorities, as well as the Chairperson of the Council of Economic Advisors. A full list of the members of the DPAC is included in E.O. 13603.126 As stipulated in law, the Chairperson of the DPAC is to be the "head of the agency to which the President has delegated primary responsibility for government-wide coordination of the authorities in this Act."127 As currently established in E.O. 13603 delegations, the Secretary of Homeland Security is the chair-designate, but the language of the law could allow the President to appoint another Secretary with revision to the E.O.128 The Chairperson of the DPAC is also required to appoint one full-time employee of the federal government to coordinate all the activities of the DPAC. Congress has exempted the DPAC from the requirements of the Federal Advisory Committee Act.129

The DPAC has annual reporting requirements relating to the Title I priority and allocation authority, and is also required to include updated copies of Title I-related rules in its report. The annual report also contains, among other items, a "description of the contingency planning ... for events that might require the use of the priorities and allocations authorities" and "recommendations for legislative actions, as appropriate, to support the effective use" of the Title I authorities.130 The DPAC report is provided to the Senate Committee on Banking, Housing, and Urban Affairs and the House Committee on Financial Services.

Impact of Offsets Report

Offsets are industrial compensation practices that foreign governments or companies require of U.S. firms as a condition of purchase in either government-to-government or commercial sales of defense articles and/or defense services as defined by the Arms Export Control Act (22 U.S.C. §2751, et seq.) and the International Traffic in Arms Regulations (22 C.F.R. §§120-130). In the defense trade, such industrial compensation can include mandatory co-production, licensed production, subcontractor production, technology transfer, and foreign investment.

The Secretary of Commerce is required by law to prepare and to transmit to the appropriate congressional committees an annual report on the impact of offsets on defense preparedness, industrial competitiveness, employment, and trade. Specifically, the report discusses "offsets" in the government or commercial sales of defense materials.131

Considerations for Congress

Enhance Oversight

Expand Reporting or Notification Requirements

Congress may consider whether to add more extensive notification and reporting requirements on the use of all or specific authorities in the DPA. These reporting or notification requirements could be added to the existing law, or could be included in conference or committee reports accompanying germane legislation, such as appropriations bills or the National Defense Authorization Act. Additional reporting or notification requirements could involve formal notification of Congress prior to or after the use of certain authorities under specific circumstances. For example, Congress may consider whether to require the President to notify Congress (or the oversight committees) when the priorities and allocations authority is used on a contract valued above a threshold dollar amount.132 Congress might also consider expanding the existing reporting requirements of the DPAC, to include semi-annual updates on the recent use of authorities or explanations about controversial determinations made by the President. Existing requirements could also be expanded from notifying/reporting to the committees of jurisdiction to the Congress as a whole, or to include other interested committees, such as the House and Senate Armed Services Committees.

Enforce and Revise Rulemaking Requirements

Congress may consider reviewing the agencies' compliance with existing rulemaking requirements. A rulemaking requirement exists for the voluntary agreement authority in Title VII that has been completed by DHS, but it has not been updated since 1981 and may be in need of an update given changes to the authority and government reorganizations since that date.133 One of the agencies responsible for issuing a rulemaking on the use of Title I authorities has yet to do so. Congress may also consider potentially expanding regulatory requirements for other authorities included in the DPA. For example, Congress may consider whether the President should promulgate rules establishing standards and procedures for the use of all or certain Title III authorities. In addition to formalizing the executive branch's policies and procedures for using DPA authorities, these regulations could also serve an important function by offering an opportunity for private citizens and industry to comment on and understand the impact of DPA authorities on their personal interests.

Broaden Committee Oversight Jurisdiction

Since its enactment, the House Committee on Financial Services, the Senate Committee on Banking, Housing, and Urban Affairs, and their predecessors have exercised legislative oversight of the Defense Production Act. The statutory authorities granted in the various titles have been vested in the President, who has delegated some of these authorities to various agency officials through E.O. 13603. As an example of the scope of delegations, the membership of the Defense Production Act Committee (DPAC), created in 2009 and amended in 2014, includes the Secretaries of Agriculture, Commerce, Defense, Energy, Labor, Health and Human Services, Homeland Security, the Interior, Transportation, the Treasury, and State; the Attorney General; the Administrators of the National Aeronautics and Space Administration and of General Services, the Chair of the Council of Economic Advisers; and the Directors of the Central Intelligence Agency and National Intelligence.

In order to complement existing oversight, given the number of agencies that currently use or could potentially use the array of DPA authorities to support national defense missions, Congress may consider reestablishing a select committee with a purpose similar to the former Joint Committee on Defense Production.134 As an alternative to the creation of a new committee, Congress may consider formally broadening DPA oversight responsibilities to include all relevant standing committees when developing its committee oversight plan.

Should DPA oversight be broadened, Congress might consider ways to enhance inter-committee communication and coordination of its related activities. This coordination could include periodic meetings to prepare for oversight hearings or ensuring that DPA-related communications from agencies are shared appropriately. Finally, because the DPA was enacted at a time when the organization and rules of both chambers were markedly different to current practice, Congress may consider the joint referral of proposed DPA-related legislation to the appropriate oversight committees.

Amending the Defense Production Act of 1950

While the act in its current form may remain in force until September 30, 2025, the legislature could amend the DPA at any time to extend, expand, restrict, or otherwise clarify the powers it grants to the President. For example, Congress could eliminate certain authorities altogether. Likewise, Congress could expand the DPA to include new authorities to address novel threats to the national defense. For example, Congress may consider creating new authorities to address specific concerns relating to production and security of emerging technologies necessary for the national defense.

#### Key to pandemic response.

J. Mark Gidley et al. 20. J. Mark Gidley chairs the White & Case Global Antitrust/Competition practice. Martin M. Toto and Sean Sigillito. “A Novel Antitrust Defense for COVID-19 Agreements: Section 708 of the Defense Production Act” <https://www.whitecase.com/sites/default/files/2020-04/novel-antitrust-defense-covid-19-agreements-section-708-defense-production-act.pdf>

There is a dire need for the assistance of private industry in developing vaccines and treatments for the SARS-CoV-2 virus, and for the manufacture and distribution of medical and other supplies to aid in the United States’ response to the COVID-19 health emergency. The Government’s recent actions indicate a desire to allow private sector companies to work together to do so quickly.

While many of the needs arising from the ongoing emergency focus specifically on medical supplies, the President’s delegation of Section 708 authority to the DHS as well as HHS potentially opens the door to voluntary agreements within broader sectors of the US economy. Under the right circumstances, and if the business combination could garner the governmental sponsor needed for the voluntary agreement, invoking the Defense Production Act’s antitrust relief provision through the enactment of voluntary agreements could allow for a more robust response to the COVID-19 pandemic.

#### Disease causes extinction and turns every impact --- it’s an *IMPACT MAGNFIER*

Dennis Pamlin & Stuart Armstrong 15. \*Executive Project Manager Global Risks, Global Challenges Foundation. \*\*James Martin Research Fellow, Future of Humanity Institute, Oxford Martin School, University of Oxford. February 2015, “Global Challenges: 12 Risks that threaten human civilization: The case for a new risk category,” Global Challenges Foundation, p.30-93. https://api.globalchallenges.org/static/wp-content/uploads/12-Risks-with-infinite-impact.pdf

A pandemic (from Greek πᾶν, pan, “all”, and δῆμος demos, “people”) is an epidemic of infectious disease that has spread through human populations across a large region; for instance several continents, or even worldwide. Here only worldwide events are included. A widespread endemic disease that is stable in terms of how many people become sick from it is not a pandemic. 260 84 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 3.1 Current risks 3.1.4.1 Expected impact disaggregation 3.1.4.2 Probability Influenza subtypes266 Infectious diseases have been one of the greatest causes of mortality in history. Unlike many other global challenges pandemics have happened recently, as we can see where reasonably good data exist. Plotting historic epidemic fatalities on a log scale reveals that these tend to follow a power law with a small exponent: many plagues have been found to follow a power law with exponent 0.26.261 These kinds of power laws are heavy-tailed262 to a significant degree.263 In consequence most of the fatalities are accounted for by the top few events.264 If this law holds for future pandemics as well,265 then the majority of people who will die from epidemics will likely die from the single largest pandemic. Most epidemic fatalities follow a power law, with some extreme events – such as the Black Death and Spanish Flu – being even more deadly.267 There are other grounds for suspecting that such a highimpact epidemic will have a greater probability than usually assumed. All the features of an extremely devastating disease already exist in nature: essentially incurable (Ebola268), nearly always fatal (rabies269), extremely infectious (common cold270), and long incubation periods (HIV271). If a pathogen were to emerge that somehow combined these features (and influenza has demonstrated antigenic shift, the ability to combine features from different viruses272), its death toll would be extreme. Many relevant features of the world have changed considerably, making past comparisons problematic. The modern world has better sanitation and medical research, as well as national and supra-national institutions dedicated to combating diseases. Private insurers are also interested in modelling pandemic risks.273 Set against this is the fact that modern transport and dense human population allow infections to spread much more rapidly274, and there is the potential for urban slums to serve as breeding grounds for disease.275 Unlike events such as nuclear wars, pandemics would not damage the world’s infrastructure, and initial survivors would likely be resistant to the infection. And there would probably be survivors, if only in isolated locations. Hence the **risk of a civilisation collapse** would come from the ripple effect of the fatalities and the policy responses. These would include political and agricultural disruption as well as economic dislocation and damage to the world’s trade network (including the food trade). Extinction risk is only possible if the aftermath of the epidemic fragments and diminishes human society to the extent that recovery becomes impossible277 before humanity succumbs to other risks (such as climate change or further pandemics). Five important factors in estimating the probabilities and impacts of the challenge: 1. What the true probability distribution for pandemics is, especially at the tail. 2. The capacity of modern international health systems to deal with an extreme pandemic. 3. How fast medical research can proceed in an emergency. 4. How mobility of goods and people, as well as population density, will affect pandemic transmission. 5. Whether humans can develop novel and effective anti-pandemic solutions.

### OFF

#### The United States federal government should interpret any patent control over seeds or plants as illegal per se

#### The CP is a PIC out of the phrase “all living organisms” --- The plan destroys innovation for new life saving tech

**Dabney, 13** (James Dabney, Jan-23-2013, accessed on 10-29-2021, Chamberlitigation, "BRIEF FOR AGILENT TECHNOLOGIES, INC., ILLUMINA, INC., LIFE TECHNOLOGIES CORP., PROMEGA CORP., QIAGEN N.V., AND ROCHE MOLECULAR SYSTEMS, INC. AS. AMICI CURIAE IN SUPPORT OF RESPONDENTS,", https://www.chamberlitigation.com/sites/default/files/scotus/files/Agilent%20Technologies%20amicus%20brief%20-%20Bowman%20v.%20Monsanto%20Co.%20%28U.S.%20Supreme%20Court%29.pdf)//Babcii

The biotechnology and research tools industry (the “Industry”) is diverse, embracing public and private, non-profit and for-profit, and academic. and corporate institutions. The Industry **spends billions of dollars each year developing technologies** that support both research and development activities and diverse commercial and industrial activities. Commercial biotechnology products provide new sources of energy, more accurate techniques for identifying criminals or exonerating the innocent, improved food safety testing. and faster and more discriminating **methods for diagnosing, detecting, and treating diseases including cancer and infections**.

Amici rely heavily on 35 U.S.C. § 271(d) and the principles of divisibility and party autonomy that the statute implements. For example, amici frequently sell research tools to persons engaged in university research. Such sales are typically made on “research use only” conditions that exclude industrial or commercial activities. By retaining use and sale rights that university **researchers have no need to buy or pay for, research tool companies** are able to make patented research products available to biomedical re-searchers at prices that are tailored to the needs and economics of the persons engaged in research, and hence are more affordable than would be the case if researchers had to pay for manufacturing, commercial diagnostic, or other non-research use rights.

Divisibility of patent rights and party autonomy in contracting are also important to the federal government’s ability to maximize its **return on investment in biomedical research** and to carry out the purposes of the Bayl-Dole Act, 35 USC. §§ 200-212. By ‘**keeping prices lower for products** sold for re- search use only, conditional sale and license transactions allow more research to occur for every dollar of federal research funds that are granted. And where federal funding results in the United States owning patents, the Patent Act authorizes agencies to grant nonexclusive, exclusive, or partially exclusive lit censes under federally owned inventions, royalty-free or for royalties or other consideration,” and “on such terme and conditions aa the granting agency considers appropriate.” 35 U-S.C. §§ 207(a), 20008).

Divisibility of patent rights and party autonomy in contracting are also critical to the biotechnology technology transfer system that has developed over past decades. This technology transfer system gives members of the Industry, including teaching and research universities, flexibility to work with multiple parties in different fields, or at different levels or places within the same field, to put patented technology to its highest and best use with the best partner. This is particularly relevant where the patented technology has many uses but no single licensee could use, develop, or commercialize a technology for all possible uses and benefits.

Uses of biomedical technologies are often subject to restrictions in patent license agreements that limit licensees to uses in specific fields and allow other licensees the right to use in other fields. Patent right divisibility and party autonomy in contracting **help licensees navigate this often complex field of patent rights use restrictions.** When a licensee develops and sells a new product that comprises amici’s patented technology, conditional sale and license terms provide a mechanism that enables the licensee to comply with field of use and other restrictions in its contracts for the sale of products embodying amicis patented inventions. Without the ability to make selective waivers of **patent rights**, **the biomedical technology transfer system would be severely disrupted and thousands upon thousands of existing licenses would be undermined**. Divisibility of patent rights and party autonomy in contracting **are also critical to the commercialization of patents** disclosing readily replicable technologies. Many research tools are replicable, such as **cell lines and DNA vectors**. If a patentee could not retain certain **use and resale rights** when selling products embodying novel replicable technologies, a customer could buy a product once and **then easily replicate and resell** it an indefinite number of times, in either identical or modified form. **This would severely disrupt the network of limited use patent licenses for the technology, force higher prices, and deprive the Industry of incentives for developing and selling replicable research tools.**

#### Xenobots are coming --- That solves toxic waste, cancer and propel nanobots

Coghlan, 20 (Simon Coghlan, Simon is a moral philosopher and a veterinarian. He is a senior research fellow in the Centre for AI and Digital Ethics (CAIDE) and the School of Computing and Information Systems (CIS)., 1-20-2020, accessed on 11-6-2021, Phys, "Not bot, not beast: Scientists create first ever living, programmable organism", <https://phys.org/news/2020-01-bot-beast-scientists-programmable.html)//Babcii>

A remarkable combination of artificial intelligence (AI) and biology has produced the world's first "**living robots**". This week, a research team of roboticists and scientists [published](https://www.pnas.org/content/early/2020/01/07/1910837117) their recipe for making a new lifeform **called xenobots** from [stem cells](https://phys.org/tags/stem+cells/). The term "xeno" comes from the frog cells (Xenopus laevis) used to make them. One of the researchers [described the creation](https://www.forbes.com/sites/simonchandler/2020/01/14/worlds-first-living-robot-invites-new-opportunities-and-risks/#379ef46c3caf) as "neither a traditional robot nor a known species of animal", but a "new class of artifact: a living, programmable organism". Xenobots are **less than 1mm long** and made of 500-1000 living cells. They have various simple shapes, including some with squat "legs". They can propel themselves in linear or circular directions, join together to act collectively, and move small objects. Using their own cellular energy, they can live up to 10 days. While these "reconfigurable biomachines" could vastly improve human, animal, and environmental health, they raise legal and ethical concerns. Strange new 'creature' To make xenobots, the research team used a supercomputer to test thousands of random designs of simple living things that could perform certain tasks. The computer was programmed with an AI "evolutionary algorithm" to predict which organisms would likely display useful tasks, such as moving towards a target. After the selection of the most promising designs, the scientists attempted to replicate the virtual models with frog skin or heart cells, which were manually joined using microsurgery tools. The heart cells in these bespoke assemblies contract and relax, giving the organisms motion. The creation of xenobots is groundbreaking. Despite being described as "programmable living robots", they are actually completely organic and **made of living tissue**. The term "robot" has been used because xenobots can be configured into different forms and shapes, and "programmed" to target certain objects—which they then unwittingly seek. They can also repair themselves after being damaged. Possible applications Xenobots may have great value. [Some speculate](https://www.technologyreview.com/f/615041/these-xenobots-are-living-machines-designed-by-an-evolutionary-algorithm/) **they could be used to clean our polluted oceans** by collecting microplastics. Similarly, they may be used to **enter confined or dangerous areas to scavenge toxins or radioactive materials**. Xenobots designed with carefully shaped "pouches" might be able to carry drugs into human bodies. Future versions may be built from a patient's own cells to repair tissue or target cancers. Being biodegradable, xenobots would have an edge on technologies made of plastic or metal. Further development of biological "robots" could accelerate our understanding of living and robotic systems. Life is incredibly complex, so manipulating living things could reveal some of life's mysteries—and improve our use of AI. Legal and ethical questions Conversely, xenobots raise legal and ethical concerns. In the same way they could help target cancers, they could also be used to hijack life functions for malevolent purposes. Some argue artificially making living things is unnatural, hubristic, or involves "playing God". A more compelling concern is that of unintended or malicious use, as we have seen with technologies in fields including nuclear physics, chemistry, biology and AI. For instance, xenobots might be used for hostile biological purposes prohibited under international law. More advanced future xenobots, especially ones that live longer and reproduce, could potentially "malfunction" and go rogue, and out-compete other species. For [complex tasks](https://phys.org/tags/complex+tasks/), xenobots may need sensory and nervous systems, possibly resulting in their sentience. A sentient programmed organism would raise additional ethical questions. Last year, the revival of a disembodied pig brain [elicited concerns about different species' suffering](https://www.nature.com/articles/d41586-019-01216-4). Managing risks The xenobot's creators have rightly acknowledged the need for discussion around the ethics of their creation. The 2018 scandal over using CRISPR (which allows the introduction of genes into an organism) may provide an instructive lesson [here](https://www.technologyreview.com/s/614761/nature-jama-rejected-he-jiankui-crispr-baby-lulu-nana-paper/). While the experiment's goal was to reduce the susceptibility of twin baby girls to HIV-AIDS, associated risks caused ethical dismay. The scientist in question [is in prison](https://www.theguardian.com/world/2019/dec/30/gene-editing-chinese-scientist-he-jiankui-jailed-three-years). When CRISPR became widely available, some experts called for a [moratorium](https://www.theguardian.com/science/2019/mar/13/scientists-call-for-global-moratorium-on-crispr-gene-editing) on heritable genome editing. Others [argued](https://www.liebertpub.com/doi/10.1089/crispr.2019.0016?utm_source=miragenews&utm_medium=miragenews&utm_campaign=news&) the benefits outweighed the risks. While each new technology should be considered impartially and based on its merits, giving life to xenobots raises certain significant questions: Should xenobots have biological kill-switches in case they go rogue? Who should decide who can access and control them? What if "homemade" xenobots become possible? Should there be a moratorium until regulatory frameworks are established? How much regulation is required? Lessons learned in the past from advances in other areas of science could help manage future risks, while reaping the possible benefits. Long road here, long road ahead The creation of **xenobots had various biological and robotic precedents**. Genetic engineering has created genetically modified mice that become [fluorescent](http://www.understandinganimalresearch.org.uk/news/research-medical-benefits/glowing-mice/) in UV light. [Designer microbes](https://advances.sciencemag.org/content/1/4/e1500077) can produce drugs and food ingredients that may eventually [replace animal agriculture](https://solarfoods.fi/). In 2012, scientists created an [artificial jellyfish](https://blogs.scientificamerican.com/brainwaves/what-would-it-take-to-really-build-an-artificial-jellyfish) called a "medusoid" from rat cells. Robotics is also flourishing. Nanobots can [monitor people's blood sugar levels](http://news.mit.edu/2013/nanotechnology-could-help-fight-diabetes-0516) and may eventually be able to [clear clogged arteries](https://www.smithsonianmag.com/innovation/tiny-robots-can-clear-clogged-arteries-180955774/). **Robots can incorporate living matter**, which we witnessed when engineers and biologists created a [sting-ray robot](https://www.sciencemag.org/news/2016/07/robotic-stingray-powered-light-activated-muscle-cells) powered by light-activated [cells](https://phys.org/tags/cells/). In the coming years, we are sure to see more creations like xenobots that evoke both wonder and due concern. And when we do, it is important we remain both open-minded and critical.

### OFF

#### The United States Patent and Trademark Office should

#### - Create an internal memorandum that any future patent over living organisms should be refused

#### - Create an internal memorandum that any current patent over living organisms should not be renewed

#### - Announce the aforementioned planks publicly and create binding enforcement mechanisms for said planks

#### That solves the aff without using antitrust --- It stops the issuing of the patent before it can even become anti-competitive

Lemley ’7 [Mark; January; Law Professor at Stanford University; Boston College Law Review, “Ten Things to Do About Patent Holdup of Standards (And One Not To),” Vol. 47]

C. Antitrust Law Can't Solve the Holdup Problem

Note what is not on this list: antitrust law. I have made ten more or less radical proposals for doing something about patent holdup, and not one of them mentions antitrust, except to say antitrust law should get out of the way of SSOs. That's not an accident. I think antitrust law serves a valuable purpose, but where the holdup problem is concerned, it is a backstop. In this particular circumstance, it's a backstop that's going to apply only if private efforts in SSOs and IP law have already failed us.

Even then, it is not clear that antitrust law is up to the task of policing patent holdup. 88 Courts may be reluctant to second-guess what they see as the judgment of patent law to give certain rights to patent owners. 89 Certainly, some courts have shown undue deference to patents even in circumstances that more clearly violate the antitrust laws. 90 Further, proving an antitrust violation requires detailed evidence [\*168] of both causation and intent, something that may be difficult even when, as a policy matter, a patentee should not be permitted to extend its rights. 91 We have yet to see a successful contested prosecution of standard-setting abuse. 92 Antitrust law can play a role here in extreme cases, such as in In re Ramous, Inc. 93 But if we design the patent law and the SSO rules correctly, those cases should not arise.

CONCLUSION

Patents provide needed incentives. But in certain circumstances, they can give a patentee too much power to restrict an integrated product on the basis of a patent covering a minor component of that product. That fact, coupled with unscrupulous behavior of some patentees, creates serious problems in the IT industry in general and SSOs in particular. Patent law should seek to realign incentives so that the value any given patentee can capture bears a reasonable relationship to the contribution its invention makes. SSOs should be diligent in finding out what patents exist and what it will cost to license them. And antitrust law should facilitate rather than interfere with this process. If we can accomplish these changes, we can ensure that patent law serves its proper role in encouraging rather than stifling innovation.

### OFF

#### FTC’s increasing enforcement in privacy now---it’s focused on algorithmic bias.

James V. Fazio 21. Special counsel in the Intellectual Property Practice Group at Sheppard, Mullin, Richter & Hampton LLP, with Liisa M. Thomas, 3/11. “What Is FTC’s Course Under Biden?” https://www.natlawreview.com/article/what-ftc-s-course-under-biden

The new acting FTC chair, Rebecca Kelly Slaughter, recently signaled that the FTC may increase enforcement and penalties in the privacy and data security realm. Slaughter pointed to several areas of focus for the FTC this year, which companies will want to keep in mind: Notifying Consumers About FTC Allegations: Slaughter referred favorably to two recent cases: (1) the Everalbum biometric settlement from earlier this year (which we wrote about at the time); and (2) the Flo Health settlement over alleged deceptive data sharing practices (which we also wrote about at the time). In drawing on these two cases, Slaughter indicated that in future cases the FTC intends to include as part of any settlement a requirement to notify customers of any FTC allegations. This, she said, would allow consumers to “vote with their feet” and help them decide whether to recommend their services to others. FTC Intent to Plead All Relevant Violations: According to Slaughter, another lesson the FTC is taking from the Flo case is to include in the cases it brings all potentially applicable violations of all relevant privacy-related laws. In the Flo case, Slaughter said the FTC should have pleaded a violation of the Health Breach Notification Rule, which requires that vendors of personal health records notify consumers of data breaches. Focus on Ed Tech and COPPA: Given the explosive growth of education technology during COVID-19, the FTC is conducting an industry sweep of the industry. Related to this, the FTC is reviewing its Children’s Online Privacy Protection Act Rule. This goes beyond the refresh the agency did of their FAQs earlier in the pandemic (which we wrote about at the time). For now, Slaughter reminds companies that parental consent is needed before collecting information online from children under the age of 13. Examination of Health Apps: The FTC will take a closer look at health apps, including telehealth and contact tracing apps, as more and more consumers are relying on such apps to manage their health during the pandemic. Overlap Between Competition and Privacy: Slaughter also indicated that it is worth looking at situations where there may be not only privacy concerns, but antitrust as well. Because the FTC has a dual mission (consumer protection and competition) she notes that it has a “structural advantage” over other regulators in that it can look at these issues, especially since -she states- “many of the largest players in digital markets are as powerful as they are because of the breadth of their access to and control over consumer data.” Racial Equality and AI/Biometrics/Geotracking: Slaughter noted that COVID-19 is exacerbating racial inequities. She pointed to the unequal access to technology, as well as algorithmic discrimination (the idea that discrimination offline becomes embedded into algorithmic system logic). The FTC intends to focus on algorithmic discrimination, as well as on the discrimination potentially embedded into facial recognition technologies. (This mirrors concerns that gave rise to the recent Portland facial recognition law, which we recently wrote about). Finally, Slaughter commented on the use of location data to identify characteristics of Black Lives Matter protesters, and said she is concerned about the misuse of location data to track Americans engaged in constitutionally protected speech. Putting it Into Practice: Companies that operate health apps, that are in the education technology space, or that use algorithms or facial recognition tools will want to keep in mind that these are areas of focus for the FTC. And for everyone, keep in mind that the FTC has indicated it will beef up privacy law penalties and will ask for more notification to injured consumers.

**Antitrust enforcement saps up FTC resources and personnel, which are finite**

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

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

#### That trades off with the necessary resources for privacy enforcement.

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

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

#### Unchecked algorithmic bias risks massive inequality and extinction.

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

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

### OFF

#### Antitrust regs causes uncertainty and expands rent-seeking

Crews and Young 19 (Clyde Wayne Crews, Vice President for Policy and Senior Fellow @ Competitive Enterprise Institute, Ryan Young is a Senior Fellow @ Competitive Enterprise Institute, “The Case against Antitrust Law”, Competitive Enterprise Institute, 04/16/2019, <https://cei.org/studies/the-case-against-antitrust-law/>)//babcii

Uncertainty. Antitrust regulation creates an enormous amount of economic uncertainty. Nobody knows how it will be used at a given time. If antitrust statutes are interpreted literally, potentially any firm, no matter how small, can be charged with an antitrust violation—or for dominating its relevant market, however defined. If a business sells goods at a lower price than its competitors, it can be charged with predatory pricing. If it sells goods at the same price as its competitors, it can be charged with collusion. And if it sells goods at a higher price than its competitors, it can be charged with abusing market power. A century of case law has evolved some guidelines, but judicial precedents can be overturned any time a new case is brought. There are few bright-line legislative or judicial standards for antitrust enforcement. It is mostly guided by a mix of inconsistently enforced judicial precedents, regulators’ personal discretion, and political factors unrelated to market competition. Even the mere threat of antitrust enforcement can have a preemptive chilling effect on innovation, business strategies, and potential efficiency-enhancing arrangements. Rent-seeking. Neo-Brandeisians rightly want to reduce rent-seeking, but they routinely propose policies that will backfire because of a common misunderstanding of how governments work in practice. Government employees do not operate with only the public interest in mind. They are human beings, with the same incentives and flaws as other human beings. They want to increase their budgets and power and enjoy the publicity that accompanies big cases. It also makes regulators especially vulnerable to what is known as a Baptist-and-boot- legger dynamic. In Clemson University economist Bruce Yandle’s classic example, a moralizing Baptist and a profit-seeking bootlegger will both favor a law requiring liquor stores to close on Sundays, though for different reasons. A true-believing “Baptist” in Congress or at the Justice Department or the FTC would be inclined to listen seriously to the entreaties of corporate “bootleggers” who can come up with virtuous-sounding reasons for why regulators should give their businesses special favorable treatment.36 Oracle, one of Microsoft’s rivals, ran its own independent Microsoft investigation during that company’s antitrust case, for what it alleged were Baptist-style reasons. “All we did is try to take information that was hidden and bring it to light,” said Oracle CEO Larry Ellison. “I don’t think that was arrogance. I think it was a public service.”37 Former Sen. Orrin Hatch (R-UT), who counted Oracle among his constituents, was one of the loudest anti-Microsoft voices in Congress. Around that time, he also received $17,500 donations from executives at Netscape, AOL, and Sun Microsystems. Perhaps heeding Hatch’s admonition that, “If you want to get involved in business, you should get involved in politics,” Microsoft expanded its presence in Washington from a small outpost at a Bethesda, Maryland, sales office to a large downtown Washington office with a full-time staff plus multiple outside lobbyists.38 Microsoft quickly went from a virtual non-entity in Washington to the 10th-largest corporate soft money campaign donor by the 1997-1998 election cycle. Sen. Hatch’s campaign was among the beneficiaries.39 The lines between Baptist and boot- legger can be blurry, and some actors play both parts. But such ethical dynamics are an integral part of antitrust regulation in practice.

#### slow growth goes nuclear – breaks down global cooperation

**Landay 17** (Jonathan – Reuters National Security Correspondent, 1/9/17, “U.S. intelligence study warns of growing conflict risk”, <https://www.reuters.com/article/us-usa-intelligence-future-idUSKBN14T1J4>)

WASHINGTON (Reuters) - The risk of **conflicts** between and within **nations** will **increase** over the next five years to levels not seen since the Cold War as **global growth slows**, the post-World War Two order erodes and **anti-globalization** fuels **nationalism**, said a U.S. intelligence report released on Monday. “These **trends** will converge at an unprecedented pace to make governing and **cooperation** harder and to change the **nature of power** – fundamentally altering the **global landscape**,” said “Global Trends: Paradox of Progress,” the sixth in a series of quadrennial studies by the U.S. National Intelligence Council. The findings, published less than two weeks before U.S. President-elect Donald Trump takes office on Jan. 20, outlined factors shaping a “dark and difficult near future,” including a more assertive **Russia** and **China**, **regional conflicts**, **terrorism**, rising **income inequality**, **climate change** and **sluggish economic growth**. Global Trends reports deliberately avoid analyzing U.S. policies or choices, but the latest study underscored the complex difficulties Trump must address in order to fulfill his vows to improve relations with Russia, level the economic playing field with China, return jobs to the United States and defeat terrorism. The National Intelligence Council comprises the senior U.S. regional and subject-matter intelligence analysts. It oversees the drafting of National Intelligence Estimates, which often synthesize work by all 17 intelligence agencies and are the most comprehensive analytic products of U.S intelligence. The study, which included interviews with academic experts as well as financial and political leaders worldwide, examined political, social, economic and technological trends that the authors project will shape the world from the present to 2035, and their potential impact. ‘INWARD-LOOKING WEST’ It said the threat of **terrorism** would grow in coming decades as small groups and individuals harnessed “**new technologies**, ideas and relationships.” **Uncertainty** about the **U**nited **S**tates, coupled with an “inward-looking West” and the weakening of international human rights and conflict prevention standards, will encourage **China** and **Russia** to challenge **American influence**, the study added. Those challenges “will stay below the threshold of hot war but bring **profound risks** of **miscalculation**,” the study warned. “Overconfidence that material strength can manage escalation will **increase** the **risks** of **interstate conflict** to levels not seen since the Cold War.” While “hot war” may be avoided, differences in values and interests among states and drives for regional dominance “are leading to a **spheres of influence** world,” it said, The latest Global Trends, the subject of a Washington conference, added that the situation also offered opportunities to governments, societies, groups and individuals to make choices that could bring “more hopeful, secure futures.” “As the paradox of progress implies, the same trends generating near-term risks also can create opportunities for better outcomes over the long term,” the study said. THE HOME FRONT The report also said that while globalization and technological advances had “enriched the richest” and raised billions from poverty, they had also “hollowed out” Western middle classes and ignited backlashes against globalization. Those trends have been compounded by the largest migrant flows in seven decades, which are stoking “nativist, anti-elite impulses.” “**Slow growth** plus technology-induced **disruptions** in **job markets** will threaten poverty reduction and **drive tensions** within countries in the years to come, fueling the very **nationalism** that contributes to tension between counties,” it said. The trends shaping the future include contractions in the working-age populations of wealthy countries and expansions in the same group in poorer nations, especially in Africa and South Asia, increasing **economic**, employment, urbanization and welfare **pressures**, the study said. The world will also continue to experience weak **near-term growth** as governments, institutions and businesses struggle to overcome **fallout** from the Great **Recession**, the study said. “**Major economies** will confront **shrinking workforces** and **diminishing productivity** gains while recovering from the 2008-09 financial **crisis** with **high debt**, **weak demand**, and doubts about globalization,” said the study. “China will attempt to shift to a consumer-driven economy from its longstanding export and investment focus. **Lower growth** will **threaten poverty reduction** in developing counties.” **Governance** will become **more difficult** as issues, including global **climate change**, **environmental degradation** and **health threats** demand **collective action**, the study added, while such cooperation **becomes harder**.

## Case

### Case

#### Extinction first --- Living is a pre-req for any other issue, magnitude is nearly infinite, and future gains in quality of life ensure it’s a prior question

Todd 17 [Ben has a 1st from Oxford in Physics and Philosophy, has published in Climate Physics, once kick-boxed for Oxford, and speaks Chinese, badly. "The case for reducing extinction risk." https://80000hours.org/articles/extinction-risk/]

In this new age, what should be our biggest priority as a civilisation? Improving technology? Helping the poor? Changing the political system? Here’s a suggestion that’s not so often discussed: our first priority should be to survive. So long as civilisation continues to exist, we’ll have the chance to solve all our other problems, and have a far better future. But if we go extinct, that’s it. Why isn’t this priority more discussed? Here’s one reason: many people don’t yet appreciate the change in situation, and so don’t think our future is at risk. Social science researcher Spencer Greenberg surveyed Americans on their estimate of the chances of human extinction within 50 years. The results found that many think the chances are extremely low, with over 30% guessing they’re under one in ten million.2 We used to think the risks were extremely low as well, but when we looked into it, we changed our minds. As we’ll see, researchers who study these issues think the risks are over one thousand times higher, and are probably increasing. These concerns have started a new movement working to safeguard civilisation, which has been joined by Stephen Hawking, Elon Musk, and new institutes founded by researchers at Cambridge, MIT, Oxford, and elsewhere. In the rest of this article, we cover the greatest risks to civilisation, including some that might be bigger than nuclear war and climate change. We then make the case that reducing these risks could be the most important thing you do with your life, and explain exactly what you can do to help. If you would like to use your career to work on these issues, we can also give one-on-one support. How likely are you to be killed by an asteroid? An overview of naturally occurring extinction risks An overview of naturally occurring extinction risks A one in ten million chance of extinction in the next 50 years — what many people think the risk is — must be an underestimate. Naturally occurring extinction risks can be estimated pretty accurately from history, and are much higher. If Earth was hit by a 1km-wide asteroid, there’s a chance that civilisation would be destroyed. By looking at the historical record, and tracking the objects in the sky, astronomers can estimate the risk of an asteroid this size hitting Earth as about 1 in 5000 per century.3 That’s higher than most people’s chances of being in a plane crash (about one in five million per flight), and already about 1000-times higher than the one in ten million risk that some people estimated.4 Some argue that although a 1km-sized object would be a disaster, it wouldn’t be enough to cause extinction, so this is a high estimate of the risk. But on the other hand, there are other naturally occurring risks, such as supervolcanoes.5 All this said, natural risks are still quite small in absolute terms. An upcoming paper by Dr. Toby Ord estimated that if we sum all the natural risks together, they’re very unlikely to add up to more than a 1 in 300 chance of extinction per century.6 Unfortunately, as we’ll now show, the natural risks are dwarfed by the human-caused ones. And this is why the risk of extinction has become an especially urgent issue. A history of progress, leading to the start of the most dangerous epoch in human history If you look at history over millennia, the basic message is that for a long-time almost everyone was poor, and then in the 18th century, that changed.7

Chart, line chart

Description automatically generated

This was caused by the industrial revolution — perhaps the most important event in history. It wasn’t just wealth that grew. The following chart shows that over the long-term, life expectancy, energy use and democracy have all grown rapidly, while the percentage living in poverty has dramatically decreased.8

Timeline

Description automatically generated

Literacy and education levels have also dramatically increased:

Chart

Description automatically generated

**People** also seem to become happier as they get wealthier. In The Better Angels of Our Nature, Steven Pinker argues that violence is going down.9 Individual freedom has increased, while racism, sexism and homophobia have decreased. Many people think the world is getting worse,10 and it’s true that modern civilisation does some terrible things, such as factory farming. But as you can see in the data, many important measures of progress have improved dramatically. More to the point, no matter what you think has happened in the past, if we look forward, improving technology, political organisation and freedom gives **our descendant**s the **potential to solve our current problems**, and have vastly better lives.11 It is possible to end poverty, prevent climate change, alleviate suffering, and more. But also notice the purple line on the second chart: war-making capacity. It’s based on estimates of global military power by the historian Ian Morris, and it has also increased dramatically. Here’s the issue: improving technology holds the possibility of enormous gains, but also enormous risks. Each time we discover a new technology, most of the time it yields huge benefits. But there’s also a chance we discover a technology with more destructive power than we have the ability to wisely use. And so, although the present generation lives in the most prosperous period in human history, it’s plausibly also the most dangerous. The first destructive technology of this kind was nuclear weapons. Nuclear weapons: a history of near-misses Today we all have North Korea’s nuclear programme on our minds, but current events are just one chapter in a long saga of near misses. We came near to nuclear war several times during the Cuban Missile crisis alone.12 In one incident, the Americans resolved that if one of their spy planes were shot down, they would immediately invade Cuba without a further War Council meeting. The next day, a spy plane was shot down. JFK called the council anyway, and decided against invading. An invasion of Cuba might well have triggered nuclear war; it later emerged that Castro was in favour of nuclear retaliation even if “it would’ve led to the complete annihilation of Cuba”. Some of the launch commanders in Cuba also had independent authority to target American forces with tactical nuclear weapons in the event of an invasion. In another incident, a Russian nuclear submarine was trying to smuggle materials into Cuba when they were discovered by the American fleet. The fleet began to drop dummy depth charges to force the submarine to surface. The Russian captain thought they were real depth charges and that, while out of radio communication, the third world war had started. He ordered a nuclear strike on the American fleet with one of their nuclear torpedoes. Fortunately, he needed the approval of other senior officers. One, Vasili Arkhipov, disagreed, preventing war. Putting all these events together, JFK later estimated that the chances of nuclear war were “between one in three and even”.13 There have been plenty of other close calls with Russia, even after the Cold War, as listed on this nice Wikipedia page. And those are just the ones we know about. Nuclear experts today are just as concerned about tensions between India and Pakistan, which both possess nuclear weapons, as North Korea.14 The key problem is that several countries maintain large nuclear arsenals that are ready to be deployed in minutes. This means that a false alarm or accident can rapidly escalate into a full-blown nuclear war, especially in times of tense foreign relations. Would a nuclear war end civilisation? It was initially thought that a nuclear blast might be so hot that it would ignite the atmosphere and make the Earth uninhabitable. Scientists estimated this was sufficiently unlikely that the weapons could be “safely” tested, and we now know this won’t happen. In the 1980s, the concern was that ash from burning buildings would plunge the Earth into a long-term winter that would make it impossible to grow crops for decades.15 Modern climate models suggest that a nuclear winter severe enough to kill everyone is very unlikely, though it’s hard to be confident due to model uncertainty.16 Even a “mild” nuclear winter, however, could still cause mass starvation.17 For this and other reasons, a nuclear war would be extremely destabilising, and it’s unclear whether civilisation could recover. How likely is a nuclear war to permanently end civilisation? It’s very hard to estimate, but it seems hard to conclude that the chance of a civilisation-ending nuclear war in the next century isn’t over 0.3%. That would mean the risks from nuclear weapons are greater than all the natural risks put together. (Read more about nuclear risks.) This is why the 1950s marked the start of a new age for humanity. For the first time in history, it became possible for a small number of decision-makers to wreak havoc on the whole world. We now pose the greatest threat to our own survival — that makes today the most dangerous point in human history. And nuclear weapons aren’t the only way we could end civilisation. How big is the risk of run-away climate change? In 2015, President Obama said in his State of the Union address that:18 “No challenge  poses a greater threat to future generations than climate change” Climate change is certainly a major risk to civilisation. The graph below shows estimates of climate sensitivity. Climate sensitivity is how much warming to expect in the long-term if CO2 concentrations double, which is roughly what’s expected within the century. The most likely outcome is 2-4 degrees of warming, which would be bad, but survivable. However, these estimates give a 10% chance of warming over 6 degrees, and perhaps a 1% chance of warming of 9 degrees. That would render large fractions of the Earth functionally uninhabitable, requiring at least a massive reorganisation of society. It would also probably increase conflict, and make us more vulnerable to other risks. (If you’re sceptical of climate models, then you should increase your uncertainty, which makes the situation more worrying.) So, it seems like the chance of a massive climate disaster created by CO2 is perhaps similar to the chance of a nuclear war. Researchers who study these issues think nuclear war seems more likely to result in outright extinction, due to the possibility of nuclear winter, which is why we think nuclear weapons pose an even greater risk than climate change. That said, climate change is certainly a major problem, which should raise our estimate of the risks even higher. (Read more about run-away climate change.) What new technologies might be as dangerous as nuclear weapons? The invention of nuclear weapons led to the anti-nuclear movement just a decade later in the 1960s, and the environmentalist movement soon adopted the cause of fighting climate change. What’s less appreciated is that new technologies will present further catastrophic risks. This is why we need a movement that is concerned with safeguarding civilisation in general. Predicting the future of technology is difficult, but because we only have one civilisation, we need to try our best. Here are some candidates for the next technology that’s as dangerous as nuclear weapons. In 1918-1919, over 3% of the world’s population died of the Spanish Flu.19 If such a pandemic arose today, it might be even harder to contain due to rapid global transport. What’s more concerning, though, is that it may soon be possible to genetically engineer a virus that’s as contagious as the Spanish Flu, but also deadlier, and which could spread for years undetected. That would be a weapon with the destructive power of nuclear weapons, but far harder to prevent from being used. Nuclear weapons require huge factories and rare materials to make, which makes them relatively easy to control. Designer viruses might be possible to create in a lab with a couple of biology PhDs. In fact, in 2006, The Guardian was able to order segments of the extinct smallpox virus by mail order.20 Some terrorist groups have expressed interest in using indiscriminate weapons like these. (Read more about pandemic risks.) Another new technology with huge potential power is artificial intelligence. The reason that humans are in charge and not chimps is purely a matter of intelligence. Our large and powerful brains give us incredible control of the world, despite the fact that we are so much physically weaker than chimpanzees. So then what would happen if one day we created something much more intelligent than ourselves? In 2017, 350 researchers who have published peer-reviewed research into artificial intelligence at top conferences were polled about when they believe that we will develop computers with human-level intelligence: that is, a machine that is capable of carrying out all work tasks better than humans. The median estimate was that there is a 50% chance we will develop high-level machine intelligence in 45 years, and 75% by the end of the century.21 These probabilities are hard to estimate, and the researchers gave very different figures depending on precisely how you ask the question.22 Nevertheless, it seems there is at least a reasonable chance that some kind of transformative machine intelligence is invented in the next century. Moreover, greater uncertainty means means that it might come sooner than people think rather than later. What risks might this development pose? The original pioneers in computing, like Alan Turing and Marvin Minsky, raised concerns about the risks of powerful computer systems,23 and these risks are still around today. We’re not talking about computers “turning evil”. Rather, one concern is that a powerful AI system could be used by one group to gain control of the world, or otherwise be mis-used. If the USSR had developed nuclear weapons 10 years before the USA, the USSR might have become the dominant global power. Powerful computer technology might pose similar risks. Another concern is that deploying the system could have unintended consequences, since it would be difficult to predict what something smarter than us would do. A sufficiently powerful system might also be difficult to control, and so be hard to reverse once implemented. These concerns have been documented by Oxford Professor Nick Bostrom in Superintelligence and by AI pioneer Stuart Russell. Most experts think that better AI will be a hugely positive development, but they also agree there are risks. In the survey we just mentioned, AI experts estimated that the development of high-level machine intelligence has a 10% chance of a “bad outcome” and a 5% chance of an “extremely bad” outcome, such as human extinction.21 And we should probably expect this group to be positively biased, since, after all, they make their living from the technology. Putting the estimates together, if there’s a 75% chance that high-level machine intelligence is developed in the next century, then this means that the chance of a major AI disaster is 5% of 75%, which is about 4%. (Read more about risks from artificial intelligence.) People have raised concern about other new technologies, such as other forms of geo-engineering and atomic manufacturing, but they seem significantly less imminent, so are widely seen as less dangerous than the other technologies we’ve covered. You can see a longer list of extinction risks here. What’s probably more concerning is the risks we haven’t thought of yet. If you had asked people in 1900 what the greatest risks to civilisation were, they probably wouldn’t have suggested nuclear weapons, genetic engineering or artificial intelligence, since none of these were yet invented. It’s possible we’re in the same situation looking forward to the next century. Future “unknown unknowns” might pose a greater risk than the risks we know today. Each time we discover a new technology, it’s a little like betting against a single number on a roulette wheel. Most of the time we win, and the technology is overall good. But each time there’s also a small chance the technology gives us more destructive power than we can handle, and we lose everything. If we add everything together, what’s the total risk? Many experts who study these issues estimate that the total chance of human extinction in the next century is between 1 and 20%. For instance, an informal poll in 2008 at a conference on catastrophic risks found they believe it’s pretty likely we’ll face a catastrophe that kills over a billion people, and estimate a 19% chance of extinction before 2100.24

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| --- | --- | --- |
| Risk | At least 1 billion T dead | Human  extinction T |
| Number killed by molecular nanotech weapons. | 10% | 5% |
| Total killed by superintelligent Al. | 5% | 5% |
| Total killed in all wars (including civil wars). | 30% | 4% |
| Number killed in the single biggest engineered pandemic. | 10% | 2% |
| Total killed in all nuclear wars. | 10% | 1% |
| Number killed in the single biggest nanotech accident. | 1% | 0.5% |
| Number killed in the single biggest natural pandemic. | 5% | 0.05% |
| Total killed in all acts of nuclear terrorism. | 1% | 0.03% |
| Overall risk of extinction prior to 2100 | n/a | 19% |

Dr. Toby Ord, who is writing a book on this topic, puts the risk in the next century at 1 in 6 — the roll of a dice. These figures are about one million times higher than what people normally think. What should we make of these estimates? Presumably, the researchers only work on these issues because they think they’re so important, so we should expect their estimates to be high (“selection bias”). But does that mean we can dismiss their concerns entirely? Given this, what’s our personal best guess? It’s very hard to say, but we find it hard to confidently ignore the risks. Overall, we think the risk is likely over 3%. Why helping to safeguard the future could be the most important thing you can do with your life How much should we prioritise working to reduce these risks compared to other issues, like global poverty, ending cancer or political change? At 80,000 Hours, we do research to help people find careers with positive social impact. As part of this, we try to find the most urgent problems in the world to work on. We evaluate different global problems using our problem framework, which compares problems in terms of: Scale – how many are affected by the problem Neglectedness -how many people are working on it already Solvability – how easy it is to make progress If you apply this framework, we think that safeguarding the future comes out as the world’s biggest priority. And so, if you want to have a big positive impact with your career, this is the top area to focus on. In the next few sections, we’ll evaluate this issue on scale, neglectedness and solvability, drawing heavily on Existential Risk Prevention as a Global Priority by Nick Bostrom and unpublished work by Toby Ord, as well as our own research. First, let’s start with the scale of the issue. We’ve argued there’s likely over a 3% chance of extinction in the next century. How big an issue is this? One figure we can look at is how many people might die in such a catastrophe. The population of the Earth in the middle of the century will be about 10 billion, so a 3% chance of everyone dying means the expected number of deaths is about 300 million. This is probably more deaths than we can expect over the next century due to the diseases of poverty, like malaria.25 Many of the risks we’ve covered could also cause a “medium” catastrophe rather than one that ends civilisation, and this is presumably significantly more likely. The survey we covered earlier suggested over a 10% chance of a catastrophe that kills over 1 billion people in the next century, which would be at least another 100 million deaths in expectation, along with far more suffering among those who survive. So, even if we only focus on the impact on the present generation, these catastrophic risks are one of the most serious issues facing humanity. But this is a huge underestimate of the scale of the problem, because if civilisation ends, then we give up our entire future too. Most people want to leave a better world for their grandchildren, and most also think we should have some concern for future generations more broadly. There could be many more people having great lives in the future than there are people alive today, and we should have some concern for their interests. There’s a possibility the human civilization could last for millions of years, so when we consider the impact of the risks on future generations, the stakes are millions of times higher – for good or evil. As Carl Sagan wrote on the costs of nuclear war in Foreign Affairs: A nuclear war imperils all of our descendants, for as long as there will be humans. Even if the population remains static, with an average lifetime of the order of 100 years, over a typical time period for the biological evolution of a successful species (roughly ten million years), we are talking about some 500 trillion people yet to come. By this criterion, the stakes are one million times greater for extinction **than for** the more modest nuclear wars that kill “only” hundreds of **millions of people**. There are many other possible measures of the potential loss–including culture and science, the evolutionary history of the planet, and the significance of the lives of all of our ancestors who contributed to the future of their descendants. Extinction is the undoing of the human enterprise. We’re glad the Romans didn’t let humanity go extinct, since it means that all of modern civilisation has been able to exist. We think we owe a similar responsibility to the people who will come after us, assuming (as we believe) that they are likely to lead fulfilling lives. It would be reckless and unjust to endanger their existence just to make ourselves better off in the short-term. It’s not just that there might be more people in the future. As Sagan also pointed out, no matter what you think is of value, there is potentially a lot more of it in the future. Future civilisation could create a world without need or want, and make mindblowing intellectual and artistic achievements. We could build a far more just and virtuous society. And there’s no in-principle reason why civilisation couldn’t reach other planets, of which there are some 100 billion in our galaxy.26 If we let civilisation end, then none of this can ever happen. We’re unsure whether this great future will really happen, but that’s all the more reason to keep civilisation going so we have a chance to find out. Failing to pass on the torch to the next generation might be the worst thing we could ever do. So, a couple of percent risk that civilisation ends seems likely to be the biggest issue facing the world today. What’s also striking is just how neglected these risks are. Why these risks are some of the most neglected global issues Here is how much money per year goes into some important causes:27 As you can see, we spend a vast amount of resources on R&D to develop even more powerful technology. We also expend a lot in a (possibly misguided) attempt to improve our lives by buying luxury goods. Far less is spent mitigating catastrophic risks from climate change. Welfare spending in the US alone dwarfs global spending on climate change. But climate change still receives enormous amounts of money compared to some of these other risks we’ve covered. We roughly estimate that the prevention of extreme global pandemics receives under 300 times less, even though the size of the risk seems about the same. Research to avoid accidents from AI systems is the most neglected of all, perhaps receiving 100-times fewer resources again, at around only $10m per year. You’d find a similar picture if you looked at the number of people working on these risks rather than money spent, but it’s easier to get figures for money. If we look at scientific attention instead, we see a similar picture of neglect (though, some of the individual risks receive significant attention, such as climate change): Our impression is that if you look at political attention, you’d find a similar picture to the funding figures. An overwhelming amount of political attention goes on concrete issues that help the present generation in the short-term, since that’s what gets votes. Catastrophic risks are far more neglected. Then, among the catastrophic risks, climate change gets the most attention, while issues like pandemics and AI are the most neglected. This neglect in resources, scientific study and political attention is exactly what you’d expect to happen from the underlying economics, and are why the area presents an opportunity for people who want to make the world a better place. First, these risks aren’t the responsibility of any single nation. Suppose the US invested heavily to prevent climate change. This benefits everyone in the world, but only about 5% of the world’s population lives in the US, so US citizens would only receive 5% of the benefits of this spending. This means the US will dramatically underinvest in these efforts compared to how much they’re worth to the world. And the same is true of every other country. This could be solved if we could all coordinate — if every nation agreed to contribute its fair share to reducing climate change, then all nations would benefit by avoiding its worst effects. Unfortunately, from the perspective of each individual nation, it’s better if every other country reduces their emissions, while leaving their own economy unhampered. So, there’s an incentive for each nation to defect from climate agreements, and this is why so little progress gets made (it’s a prisoner’s dilemma). And in fact, this dramatically understates the problem. The greatest beneficiaries of efforts to reduce catastrophic risks are future generations. They have no way to stand up for their interests, whether economically or politically. If future generations could vote in our elections, then they’d vote overwhelmingly in favour of safer policies. Likewise, if future generations could send money back in time, they’d be willing to pay us huge amounts of money to reduce these risks. (Technically, reducing these risks creates a trans-generational, global public good, which should make them among the most neglected ways to do good.) Our current system does a poor job of protecting future generations. We know people who have spoken to top government officials in the UK, and many want to do something about these risks, but they say the pressures of the news and election cycle make it hard to focus on them. In most countries, there is no government agency that naturally has mitigation of these risks in its remit. This is a depressing situation, but it’s also an opportunity. For people who do want to make the world a better place, this lack of attention means there are lots high-impact ways to help. What can be done about these risks? We’ve covered the scale and neglectedness of these issues, but what about the third element of our framework, solvability? It’s less certain that we can make progress on these issues than more conventional areas like global health. It’s much easier to measure our impact on health (at least in the short-run) and we have decades of evidence on what works. This means working to reduce catastrophic risks looks worse on solvability. However, there is still much we can do, and given the huge scale and neglectedness of these risks, they still seem like the most urgent issues. We’ll sketch out some ways to reduce these risks, divided into three broad categories: 1. Targeted efforts to reduce specific risks One approach is to address each risk directly. There are many concrete proposals for dealing with each, such as the following: Many experts agree that better disease surveillance would reduce the risk of pandemics. This could involve improved technology or better collection and aggregation of existing data, to help us spot new pandemics faster. And the faster you can spot a new pandemic, the easier it is to manage. There are many ways to reduce climate change, such as helping to develop better solar panels, or introducing a carbon tax. With AI, we can do research into the “control problem” within computer science, to reduce the chance of unintended damage from powerful AI systems. A recent paper, Concrete problems in AI safety, outlines some specific topics, but only about 20 people work full-time on similar research today. In nuclear security, many experts think that the deterrence benefits of nuclear weapons could be maintained with far smaller stockpiles. But, lower stockpiles would also reduce the risks of accidents, as well as the chance that a nuclear war, if it occurred, would end civilisation. We go into more depth on what you can do to tackle each risk within our problem profiles: AI safety Pandemic prevention Nuclear security Run-away climate change We don’t focus on naturally caused risks in this section, because they’re much less likely and we’re already doing a lot to deal with some of them. Improved wealth and technology makes us more resilient to natural risks, and a huge amount of effort already goes into getting more of these. 2. Broad efforts to reduce risks Rather than try to reduce each risk individually, we can try to make civilisation generally better at managing them. The “broad” efforts help to reduce all the threats at once, even those we haven’t thought of yet. For instance, there are key decision-makers, often in government, who will need to manage these risks as they arise. If we could improve the decision-making ability of these people and institutions, then it would help to make society in general more resilient, and solve many other problems. Recent research has uncovered lots of ways to improve decision-making, but most of it hasn’t yet been implemented. At the same time, few people are working on the issue. We go into more depth in our write-up of improving institutional decision-making. Another example is that we could try to make it easier for civilisation to rebound from a catastrophe. The Global Seed Vault is a frozen vault in the Arctic, which contains the seeds of many important crop varieties, reducing the chance we lose an important species. Melting water recently entered the tunnel leading to the vault due, ironically, to climate change, so could probably use more funding. There are lots of other projects like this we could do to preserve knowledge. Similarly, we could create better disaster shelters, which would reduce the chance of extinction from pandemics, nuclear winter and asteroids (though not AI), while also increasing the chance of a recovery after a disaster. Right now, these measures don’t seem as effective as reducing the risks in the first place, but they still help. A more neglected, and perhaps much cheaper option is to create alternative food sources, such as those that be produced without light, and could be quickly scaled up in a prolonged winter. Since broad efforts help even if we’re not sure about the details of the risks, they’re more attractive the more uncertain you are. As you get closer to the risks, you should gradually reallocate resources from broad to targeted efforts (read more). We expect there are many more promising broad interventions, but it’s an area where little research has been done. For instance, another approach could involve improving international coordination. Since these risks are caused by humanity, they can be prevented by humanity, but what stops us is the difficulty of coordination. For instance, Russia doesn’t want to disarm because it would put it at a disadvantage compared to the US, and vice versa, even though both countries would be better off if there were no possibility of nuclear war. However, it might be possible to improve our ability to coordinate as a civilisation, such as by improving foreign relations or developing better international institutions. We’re keen to see more research into these kinds of proposals. Mainstream efforts to do good like improving education and international development can also help to make society more resilient and wise, and so also contribute to reducing catastrophic risks. For instance, a better educated population would probably elect more enlightened leaders (cough). Richer countries are better able to prevent pandemics — it’s no accident that Ebola took hold in some of the poorest parts of West Africa. But, we don’t see education and health as the best areas to focus on for two reasons. First, these areas are far less neglected than the more unconventional approaches we’ve covered. In fact, improving education is perhaps the most popular cause for people who want to do good, and in the US alone, receives 800 billion dollars of government funding, and another trillion dollars of private funding. Second, these approaches have much more diffuse effects on reducing these risks — you’d have to improve education on a very large scale to have any noticeable effect. We prefer to focus on more targeted and neglected solutions. 3. Learning more and building capacity We’re highly uncertain about which risks are biggest, what is best to do about them, and whether our whole picture of global priorities might be totally wrong. This means that another key goal is to learn more about all of these issues. We can learn more by simply trying to reduce these risks and seeing what progress can be made. However, we think the most neglected and important way to learn more right now is to do “global priorities research”. This is a combination of economics and moral philosophy, which aims to answer high-level questions about the most important issues for humanity. There are only a handful of researchers working full-time on these issues. Another way to handle uncertainty is to build up resources that can be deployed in the future when you have more information. One way of doing this is to earn and save money. You can also invest in your career capital, especially your transferable skills and influential connections, so that you can achieve more in the future. However, we think that a potentially better approach than either of these is to build a high-quality community that’s focused on reducing these risks, whatever they turn out to be. The reason this can be better is that it’s possible to grow the capacity of a community faster than you can grow your individual wealth or career capital. For instance, if you spent a year doing targeted one-on-one outreach, it’s not out of the question to find one other person with relevant expertise to join you. This would be an annual return to the cause of about 100%. Right now, we are focused on building the effective altruism community, which contains many people who want to reduce these risks. Moreover, the recent rate of growth, and studies of specific efforts to grow the community, suggest that high rates of return are possible. However, we expect that other community building efforts will also be valuable. It would be great to see a community of scientists trying to promote a culture of safety in academia. It would be great to see a community of policymakers who want to try to reduce these risks, and make government have more concern for future generations. Given how few people actively work on reducing these risks, we expect that there’s a lot that could be done to build a movement around them. In total, how effective is it to reduce these risks? Considering all the approaches to reducing these risks, and how few resources are devoted to some of them, it seems like substantial progress is possible. In fact, even if we only consider the impact of these risks on the present generation (ignoring any benefits to future generations), they’re plausibly the top priority. Here are some very rough and simplified figures to show how this could be possible. It seems plausible to us that $100 billion spent on reducing extinction risk could reduce it by over 1% over the next century. A one percentage point reduction in the risk would be expected to save about 100 million lives among the present generation (1% of about 10 billion people alive today). This would mean the investment would save lives for only $1000 per person. Greg Lewis has made a more detailed estimate, arriving at a mean of $9200 per life saved in the present generation.28 There are also more estimates in the thread. We think Greg is likely too conservative, because he assumes the risk of extinction is only 1% over the next century, when our estimate is that it’s several times higher. We also think the next billion dollars spent on reducing extinction risk could cause a larger reduction in the risk than Greg assumes (note that this is only true if the billion were spent on the most neglected issues like AI safety and biorisk, rather than climate change which already receives hundreds of billions of dollars of investment). We wouldn’t be surprised if the cost per present lives saved for the next one billion dollars invested in reducing extinction risk were under $100. GiveWell’s top recommended charity, Against Malaria Foundation (AMF), is often presented as one of the best ways to help the present generation and saves lives for around $7500 (2017 figures).29 So these estimates would put extinction risk reduction as better or in the same ballpark cost-effectiveness as AMF for saving lives in the present generation — a charity that was specifically selected for being outstanding on that dimension. Likewise, we think that if 10,000 talented young people focused their careers on these risks, they could achieve something like a 1% reduction in the risks. That would mean that each person would save 1000 lives over their careers in the present generation, which is probably better than what they could save by earning to give and donating to The Against Malaria Foundation.30 In one sense, these are unfair comparisons, because GiveWell’s estimate is far more solid and well-researched, whereas our estimate is more of an informed guess. There may also be better ways to help the present generation than AMF (e.g. policy advocacy). However, we’ve also dramatically understated the benefits of reducing extinction risks. The main reason to safeguard civilisation is not to benefit the present generation, but to benefit future generations. We ignored them in this estimate. If we also consider future generations, then the effectiveness of reducing extinction risks is orders of magnitude higher, and it’s hard to imagine a more urgent priority right now. Now you can either read some responses to these arguments, or skip ahead to practical ways to contribute. Who shouldn’t prioritise safeguarding the future? The arguments presented rest on some assumptions that not everyone will accept. Here we present some of the better responses to these arguments. You need to focus more on your friends and family We’re only talking about what the priority should be if you are trying to help people in general, treating everyone’s interests as equal (what philosophers sometimes call “impartial altruism”). Most people care about helping others to some degree: if you can help a stranger with little cost, that’s a good thing to do. People also care about making their own lives go well, and looking after their friends and family, and we’re the same. How to balance these priorities is a difficult question. If you’re in the fortunate position to be able to contribute to helping the world, then we think safeguarding the future should be where to focus. We list concrete ways to get involved in the next section. Otherwise, you might need to focus on your personal life right now, contributing on the side, or in the future. You think the risks are much lower than we’ve argued We don’t have robust estimates of many of the human-caused risks, so you could try to make your own estimates and conclude that they’re much lower than we’ve made out. If they were sufficiently low, then reducing them would cease to be the top priority. We don’t find this plausible for the reasons covered. If you consider all the potential risks, it seems hard to be confident they’re under 1% over the century, and even a 1% risk probably warrants much more action than we currently see. You think there’s almost nothing more we can do about the risks We rate these risks as less “solvable” than issues like global health, so expect progress to be harder per dollar. That said, we think their scale and neglectedness more than makes up for this, and so they end up more effective in expectation. Many people think effective altruism is about only supporting “proven” interventions, but that’s a myth. It’s worth taking interventions that only have a small chance of paying off, if the upside is high enough. The leading funder in the community now advocates an approach of “hits-based giving”. However, if you were much more pessimistic about the chances of progress than us, then it might be better to work on more conventional issues, such as global health. Personally, we might switch to a different issue if there were two orders of magnitude more resources invested in reducing these risks. But that’s a long way off from today. A related response is that we’re already taking the best interventions to reduce these risks. This would mean that the risks don’t warrant a change in practical priorities. For instance, we mentioned earlier that education probably helps to reduce the risks. If you thought education was the best response (perhaps because you’re very uncertain which risks will be most urgent), then because we already invest a huge amount in education, you might think the situation is already handled. We don’t find this plausible because, as listed, there are lots of untaken opportunities to reduce these risks that seem more targeted and neglected. Another example like this is that economists sometimes claim that we should just focus on economic growth, since that will put us in the best possible position to handle the risks in the future. We don’t find this plausible because some types of economic growth increase the risks (e.g. the discovery of new weapons), so it’s unclear that economic growth is a top way to reduce the risks. Instead, we’d at least focus on differential technological development, or the other more targeted efforts listed above. You think there’s a better way of helping the future Although reducing these risks is worth it for the present generation, much of their importance comes from their long-term effects — once civilisation ends, we give up the entire future. You might think there are other actions the present generation could take that would have very long-term effects, and these could be similarly important to reducing the risk of extinction. In particular, we might be able to improve the quality of the future by preventing our civilization from getting locked into bad outcomes permanently. This is going to get a bit sci-fi, but bear with us. One possibility that has been floated is that new technology, like extreme surveillance or psychological conditioning, could make it possible to create a totalitarian government that could never be ended. This would be the 1984 and Brave New World scenario respectively. If this government were bad, then civilisation might have a fate worse than extinction by causing us to suffer for millennia. Others have raised the concern that the development of advanced AI systems could cause terrible harm if it is done irresponsibly, perhaps because there is a conflict between several groups raising to develop the technology. In particular, if at some point in the future, developing these systems involves the creation of sentient digital minds, their wellbeing could become incredibly important. Risks of a future that contains an astronomical amount of suffering have been called “s-risks”.31 If there is something we can do today to prevent an s-risk from happening (for instance, through targeted research in technical AI safety and AI governance), it could be even more important. Another area to look is major technological transitions. We’ve mentioned the dangers of genetic engineering and artificial intelligence in this piece, but these technologies could also create a second industrial revolution and do a huge amount of good once deployed. There might be things we can do to increase the likelihood of a good transition, rather than decrease the risk of a bad transition. This has been called trying to increase “existential hope” rather than decrease “existential risk”.32 We agree that there might be other ways that we can have very long-term effects, and these might be more pressing than reducing the risk of extinction. However, most of these proposals are not yet as well worked out, and we’re not sure about what to do about them. The main practical upshot of considering these other ways to impact the future, is that we think it’s even more important to positively manage the transition to new transformative technologies, like AI. It also makes us keener to see more global priorities research looking into these issues. Overall, we still think it makes sense to first focus on reducing extinction risks, and then after that, we can turn our attention to other ways to help the future. One way to help the future we don’t think is a contender is speeding it up. Some people who want to help the future focus on bringing about technological progress, like developing new vaccines, and it’s true that these create long-term benefits. However, we think what most matters from a long-term perspective is where we end up, rather than how fast we get there. Discovering a new vaccine probably means we get it earlier, rather than making it happen at all. Moreover, since technology is also the cause of many of these risks, it’s not clear how much speeding it up helps in the short-term. Speeding up progress is also far less neglected, since it benefits the present generation too. As we covered, over 1 trillion dollars is spent each year on R&D to develop new technology. So, speed-ups are both less important and less neglected. To read more about other ways of helping future generations, see Chapter 3 of On the Overwhelming Importance of Shaping the Far Future by Dr. Nick Beckstead You’re confident the future will be short or bad If you think it’s virtually guaranteed that civilisation won’t last a long time, then the value of reducing these risks is significantly reduced (though perhaps still worth taking to help the present generation). We agree there’s a significant chance civilisation ends soon (which is why this issue is so important), but we also think there’s a large enough chance that it could last a very long time, which makes the future worth fighting for. Similarly, if you think it’s likely the future will be more bad than good, then the value of reducing these risks goes down (or if we have much more obligation to reduce suffering than increase wellbeing). We don’t think this is likely, however, because people want the future to be good, so we’ll try to make it more good than bad. We also think that there has been significant moral progress over the last few centuries (due to the trends noted earlier), and we’re optimistic this will continue. See more discussion in footnote 11.11 What’s more, even if you’re not sure how good the future will be, or suspect it will be bad in ways we may be able to prevent in the future, you may want civilisation to survive and keep its options open. People in the future will have much more time to study whether it’s desirable for civilisation to expand, stay the same size, or shrink. If you think there’s a good chance we will be able to act on those moral concerns, that’s a good reason to leave any final decisions to the wisdom of future generations. Overall, we’re highly uncertain about these big-picture questions, but that generally makes us more concerned to avoid making any irreversible commitments.33 Beyond that, you should likely put your attention into ways to decrease the chance that the future will be bad, such as avoiding s-risks. You’re confident we have much stronger moral obligations to help the present generation If you think we have much stronger obligations to the present generation than future generations (such as person-affecting views of ethics), then the importance of reducing these risks would go down. Personally, we don’t think these views are particularly compelling. That said, we’ve argued that even if you ignore future generations, these risks seem worth addressing. The efforts suggested could still save the lives of the present generation relatively cheaply, and they could avoid lots of suffering from medium-sized disasters. What’s more, if you’re uncertain about whether we have moral obligations to future generations, then you should again try to keep your options open, and that means safeguarding civilisation. Nevertheless, if you combined the view that we don’t have large obligations to future generations with the position that the risks are also relatively unsolvable, or that there is no useful research to be done, then another way to help present generations could come out on top. This might mean working on global health, mental health or speeding up technology. Alternatively, you might think there’s another moral issue that’s more important, such as factory farming. What can you do to help? Some areas to focus on Our best evidence suggests that we’re the only intelligent life in the observable universe.34 Might we be the generation that extinguishes this life, and leaves the universe barren for the rest of eternity? Let’s see how you can help avoid that.

#### Their impact oversimplifies the contingency of violence

Svirsky 16 (Marcelo, School of Humanities and Social Inquiry, University of Wollongong, “Resistance is a structure not an event”, Settler Colonial Studies) DB

In what seems to be an attempt to soften Wolfe’s methodological position, Veracini explains that if ‘there is a plot in the “historiography of elimination” and more generally in settler-colonial studies it is that while the structure attempts to eliminate Indigenous peoples it fails to do so’. The ‘structure cannot be reduced to its intention’. 35 That is to say, Wolfe’s logic of elimination should not be equated with elimination itself. As Veracini explains: Far from equating settler colonialism with elimination, Wolfe’s ‘structure’ refers to a continuing relationship of inequality between Indigenous and settler collectives. Beside ‘structure’ and ‘event’, it seems important to note that Wolfe refers to a logic of elimination, not to elimination itself. After all, were Indigenous elimination to become an accomplished and irretrievable fact, settler colonialism would lose its logic.36 Though the key for Wolfe is to shed light on the mechanisms of elimination, Veracini takes Wolfe’s position that ‘we should not view the logic of elimination as solely a drive to exterminate Native human beings’, and suggests that we should focus on what the structure actualising the logic fails to accomplish.37 The difference between the two highlights the incompleteness of the settler project. If settler colonialism is not a fait accompli but an incomplete project invested in a continuing structuration of life actualising the logic of elimination, then we may expect the settler colonial paradigm to take seriously phenomena of struggle, resistance and confrontation, and hence to align itself with the idea of power not just as coercion or repression but as a complex multiplicity. This is simply because the incompleteness of elimination must be explained, and it cannot be explained just in terms of the oppressor’s self-error or strategic deferment. The methodological imperative that derives then, is to trace the forces that cause the settler structure to fail and remain incomplete – forces that work either by compelling retreat in specific policy areas, or because of the ineffectiveness of the settler structure in territorialising its logic and imposing its discourse, codifications, and meanings in all areas of life. As Macoun and Strakosch note, ‘[e]xposing the settler colonial project as fundamentally incomplete – and unable to be completed in the face of Indigenous resistance – has the potential to be a profoundly liberating and destabilizing move’. 38 This is because this move leads research to deal with liberatory forces. Some Palestinian scholars have taken the analysis of the Israeli settler state in this direction. Recently, Nadera Shalhoub-Kevorkian draws on Wolfe’s logic of elimination but not without combining her analysis of surveillance and fear with an account of practices of resistance.39 Similarly, Mazin Qumsiyeh notes that the brutal removal of villagers during Ottoman and later the British and, finally, Israeli rule over the past thirteen decades would have proceeded much faster and certainly would have resulted in a far more homogeneous Jewish state had it not been for Palestinian resistance.40 Explaining strategic and tactical changes in the continuing implementation of elimination only by means of the subject’s determination to eliminate appears as an act of theoretical cannibalism. The vicissitudes of elimination are the vicissitudes of the struggle, of resistance; or, as Veracini recently put it: the ‘settler colonial present is also an indigenous one’. 41 Settler stability, in other words, needs to be explained not just by way of the discourse of settler inscription but by taking seriously Veracini’s insistence that the settler colonial situation is best described in terms of a ‘permanent movement’. 42 Movement here needs to be conceived as a constantly changing composition of forces – those which seek to eliminate indigenous life together with those that either cause some of these attempts to fail, or that institute forms of life contiguous to settlerism – in both cases compelling settler colonialism to rework itself.

#### Abortion DA --- The plans framing of embryos as living things justifies pro-life logics

Gaurdian, ND (Gaurdian, Gaurdian uk, No Date, accessed on 1-8-2022, Theguardian, "What is a seed? Is it living or non-living? | Notes and Queries | guardian.co.uk", https://www.theguardian.com/notesandqueries/query/0,,-195894,00.html)//babcii

K Vishwanath, Bangalore, India

**A seed is the embryo of a new plant** and as such is a living thing ,but in a dormant state, which requires being buried in soil or other suitable matter to trigger off the renewal process.

#### Thousands of alt causes like animals, etc…

#### Plan can only topically apply to “private sector” --- Public sector thumps

CFS 01 --- Center for food safety, “DEVELOPMENT OF THE SEED PATENT SYSTEM” https://www.centerforfoodsafety.org/issues/303/seeds/development-of-the-seed-patent-system

With the view that government seed programs constrained potential profits, the nascent seed industry aimed to shift seed breeding and development away from government programs toward private, commercial entities. Through lobbying and other means of influence in the last several decades, industry has steadily established intellectual property rights (IPR) and patent regimes of exclusivity through legal and policy instruments. These include the following:

1930: The Plant Patent Act (PPA) allowed asexually reproduced plants, excluding tuber-propagated plants, to receive patent protection.

1970: The Plant Variety Protection Act (PVPA) gave plant breeders 25 years exclusive IPR via a Certificate for a newly developed plant variety, including sexually reproduced plants and tuber-propagated plant varieties. However, the PVPA granted exemptions to allow researchers and farmers to save seed.

1980: Diamond v. Chakrabartyawarded the first patent on life – a utility patent – for a genetically engineered (GE) bacterium.

1980: The Bayh-Dole Act allowed public institutions to obtain patents on publicly funded research and spurred the initiation of public-private partnerships, where industry funds public research to advance their own goals and often appropriates the resulting technology.

#### The current antitrust process is robust, guaranteeing sufficient access

Dr. Robert Young 18, Former Chief Economist for the American Farm Bureau Federation, Served as Chief Economist of the U.S. Senate Committee on Agriculture, Ph.D. in Agricultural Economics from the University of Missouri, “Regulators Did Their Job, Now Let Agriculture Merger Go Through”, The Hill, 1/31/2018, <https://thehill.com/opinion/energy-environment/371673-regulators-did-their-job-now-let-agriculture-merger-go-through> [language modified]

There is no denying the U.S. farming economy is in a constant state of flux. If ever there was a sector that is attuned to technology, it must be American agriculture. Farmers have to be financers of the first order to work in the kind of high-capital, low-margin business in which they chose to make a living.

To do this, farmers must rely on a competitive marketplace that embraces innovation and maintains consumer choice. As agricultural companies, big and small, work to meet the needs of their farming customers, they too are constantly fighting an uphill battle against regulatory challenges and funding issues that affect the odds of bringing successful products to market.

One way to meet the growing demands of farming customers while overcoming obstacles to agricultural innovation is through thoughtful alliances between key agricultural companies with strong capabilities in two complementary offerings. While there are some well-founded concerns regarding industry consolidation, there are some business partnerships that will also be the key to ensuring American farmers maintain their competitive edge in the global marketplace. Consumers and farmers will see positive results from the collaboration of agricultural powerhouses on new products and tools to make America’s farms more efficient.

However, many [ignore] ~~turn a blind eye~~ to the positives of industry consolidation and mergers between companies such as Dow-Dupont and the upcoming acquisition of Monsanto by Bayer. Recently, Bayer’s proposed acquisition of Monsanto has been met with both blunt and thinly veiled opposition driven by both politics and competitors, even as the deal goes through a very rigorous and methodical antitrust review process in countries around the world.

In fact, all evidence points to the fact that the process is working. Consider a study released by Texas A&M in 2016. Researchers at A&M concluded the Bayer-Monsanto deal as originally constructed had the potential to raise cotton seed costs by 18.2 percent generating a company with a 70 percent market share for cotton seed. Not surprisingly, the prospect of such market concentration raised the alarm among farmers, ranchers and regulators alike.

However, since the study’s release, and as a result of the regulatory process, Bayer has agreed to divest $6.98 billion of its Crop Science business including the majority of their global cotton seed business, as well as much of their canola and soybean seed business. This transaction also includes the sale of Bayer’s LibertyLink technology for herbicide tolerance to proactively reduce overlap with Monsanto’s own offerings.

In short, American farmers have been right to raise their concerns about a perceived anti-competitive marketplace during a time when agricultural input costs are increasing. And regulators have been correct in responding. But they should also be informed of the facts. Bayer and Monsanto have two complementary offerings, crop chemical protection and plant genetics. Combining these two companies will allow them to reduce inefficiencies and advance new products to farmers faster. Following free market based policies, regulators have taken appropriate steps to balance market and consumer concerns without stifling business ambitions that help the greater good.

Let us also recognize that the Dow-Dupont merger is happening. We have already created a joint crop chemical/seed technology company. Having only one with that combination of attributes at this point in time would also be anti-competitive. In short, if you are going to have one, you had better have two.

While there should always be tough scrutiny of any major companies merging, the antitrust process both here and abroad carefully examines steps that companies should take during the merger process in order to not harm competition, or drive prices up for farmers. By requesting companies, including Bayer, Dow and ChemChina, to divest certain businesses and make certain changes, consumers and farmers have the best of both worlds: protection and innovation.

Let’s not be short-sighted on the positives of the Bayer-Monsanto deal and be sure all of the facts are on the table. Everyone wants to see American farmers succeed and continue to lead in the global agriculture marketplace, but placing further restrictions on the free market and stifling innovation is not the way forward.

#### Removing patents would trigger vertical integration which is WORSE for competition and monopolization

**Weiner, 13** (Robert Weiner, Dr. Robert J. Weiner teaches international finance, economics, and strategy. He received his PhD in 1986, and has been at GW since 1994, Jan 2013, accessed on 10-29-2021, Chamberlitigation, "Brief of economists as amici curaie in support of respondants bowman", https://www.chamberlitigation.com/sites/default/files/scotus/files/Economists%20amicus%20brief%20-%20Bowman%20v.%20Monsanto%20Co.%20%28U.S.%20Supreme%20Court%29.pdf)//Babcii

B. Applying Exhaustion Could **Lead to Increased Vertical Integration**, Which Could Reduce Efficiency and Competition.

Companies historically have chosen from two basic models to extract the value of intellectual property. Some companies choose to keep their **i**ntellectual **p**roperty entirely within the organization by **vertically integrating** and engaging in all aspects of the design and production process in-house. Other companies adopt a strategy of performing certain functions in-house but also licensing others to enable the development of other products that are complementary to the patent holder's technology, thus potentially increasing the demand for the rights holder's invention. For example, Apple’s iOS operating system for phones and tablets is available only on hard ware that Apple provides. Google, in contrast, has broadly licensed its Android operating system, which is available on phones and tablets from Google's competitors as well as from Google itself.

Both **models have been used in the seed and trait business**. For example, Dow's Herculex® insect pro- tection trait was originally available almost exclusively in seed sold by Pioneer (Dow's development partner) and in Dow’s Mycogen® brand. See New Bt Trait Launched by Pioneer, Mycogen, CORN & SOY- BEAN DIGEST (June 21, 2001), available at http:// cornandsoybeandigest.com/new-bt-trait-launched-pio neer-mycogen. **In contrast**, Monsanto has **espoused broad licensing**: its strategy has been to make its traits available in the germplasm **of as many different seed companies as possible**. See, e.g., GianCarlo Moschini, Competition Issues in the Seed Industry and the Role of Intellectual Property, CHOICES, available at \_http://www.choicesmagazine.org/magazine/ print.php?article=120 (discussing Monsanto's broad licensing strategy).

One of the reasons that firms integrate vertically is to lower transaction costs involved in negotiating, monitoring and enforcing contracts. See, e.g., Dennis W. Carlton & Jeffrey M. Perloff, MODERN INDUSTRIAL ORGANIZATION 380 (3d ed. 2000). Accordingly, a rule that seed and trait patents are exhausted by a first sale could push inventors to a vertical integration model for a number of reasons. First, both traits and varietal parent seed are supplied to seed companies in germplasm that the licensees use to breed their own soybeans. Because the sale of that breeder stock would exhaust the innovator’s rights in its invention, the innovator would need to rely on contract remedies rather than patent infringement claims against the licensee, with all of the costs and risk that we have described above.

Additionally, a rule of exhaustion would **reduce incentives to outlicense traits** and germplasm because, by outlicensing, innovators take a risk that a licensee will destroy the innovator’s business model by selling to customers who save and **replant** seeds without adequate contractual protection of the inno- vator.

Because the core of an intellectual property right is the right to exclude, **innovators are not required to license their inventions to competitors**. See, eg., Hartford-Empire Co. v. United States, 323 U.S. 386, 432 (1945) (“A patent owner is not in the position of a quasi-trustee for the public or under any obligation to see that the public acquires the free right to use the invention. He has no obligation either to use it or to grant its use to others.”). But there is no efficiency justification for policies that prohibit the broad licensing of intellectual property rights. While vertical integration is not inherently **inferior to a broad licensing model**, **denying innovators the choice to license broadly is inefficient and anticompetitive.**

Providing incentives for seed and trait developers **to create closed systems would harm growers by reducing competition** to supply soybeans containing a particular trait. Broad trait licensing means that traits can be available in soybeans offered by dozens of soybean seed companies, instead of just companies affiliated with the trait developer. **Farmers benefit from the competition among seed suppliers this incentive structure enables**. The alternative model— **where Monsanto traits are available only in Monsanto germplasm** and Dow traits are available only in Dow germplasm—**would lead to higher prices and less innovation.**

#### It destroys small farmers --- It forces them to ignore cost-efficiency and take predatory loans

**Weiner, 13** (Robert Weiner, Dr. Robert J. Weiner teaches international finance, economics, and strategy. He received his PhD in 1986, and has been at GW since 1994, Jan 2013, accessed on 10-29-2021, Chamberlitigation, "Brief of economists as amici curaie in support of respondants bowman", https://www.chamberlitigation.com/sites/default/files/scotus/files/Economists%20amicus%20brief%20-%20Bowman%20v.%20Monsanto%20Co.%20%28U.S.%20Supreme%20Court%29.pdf)//Babcii

1. Seed and trait prices would rise as innovators set prices to capture the full value of the use of their inventions over many generations of seed.

If the exhaustion doctrine applied, seed and trait innovators would need to price seed to capture not just the value of a single use, but the value of using the seed and trait **for many generations** in the future, as well as the value of the right to breed with the seed. This price for perpetual rights to use and reuse the patented technology would necessarily be **far higher** than the price to use the technology a single time.

This **price increase would reduce the welfare of farmers** for several reasons. While there might superficially appear to be no economic difference be- tween charging annual license fees and charging **a single perpetual license fee** that is the discounted present value of those annual payments, the analysis is not so simple. Given the choice, different farmers would engage in seed saving to different degrees. In fact, even before transgenic traits emerged, most soy- bean farmers did not save seed but instead purchased new seed of whatever variety each believed was likely to produce the greatest yield in a particular environment. See, e.g., SEED INDUSTRY IN U.S. AGRICULTURE. at 36 (“About 25% of soybean seed in 1997 was estimated to be farmer saved.”). In a world where seed and trait patents were exhausted after the first sale, the higher up-front cost of seeds and traits (that included saved seed rights) would push farmers to save seed when they would otherwise prefer not to do so. The majority of farmers that would prefer to take advantage of new seed varieties each year rather than save seed would experience a loss in welfare from the **inability to cost-effectively purchase** the best new seed varieties each year, even if the cost of a perpetual license were financially equivalent to the cost of buying new seed each year.

Farmers would also suffer because, even if the price for a perpetual license were set at the present value of annual license fees, farmers are not indifferent to high up-front costs. Many individual **farmers borrow to buy seed**, paying back the loan when the crop is harvested. If farmers faced a higher up-front cost, **loans would** need to be **larger**, have longer terms, and would be **riskier** and **subject to higher interest rates**.

This harm to farmers would translate into consumer harm in several ways. Farmers that lost the practical ability to buy new and improved varieties each year would suffer from **reduced crop yield**, **reducing output and raising prices** to consumers. Farmers’ increased financing costs for **longer term loans would also be reflected in higher prices** passed along to consumers. Finally, smaller farmers with less access to capital are likely to be disproportionately harmed by a shift from annual license fees to an upfront pricing model. These farmers will face higher costs and be less effective competitors.

#### Extinction reps are good and a necessary ethical response to settler colonialism

Joseph J. Z. **Weiss 15**. Ph.D. candidate, Anthropology, University of Chicago. December 2015. “Unsettling Futures: Haida Future-Making, Politics and Mobility in the Settler Colonial Present.” p.216-232, https://knowledge.uchicago.edu/bitstream/handle/11417/1121/Weiss\_uchicago\_0330D\_13139.pdf?sequence=1&isAllowed=y

Conclusion: “What’s next? Just guess.” Signs of the Future One of the more recent additions to the socio-landscape of Old Massett, which I noticed on a return visit in 2014, was a series of blue signs that had appeared in many of the lawns on reserve and a good few uptown. The sign was a good two feet high and emblazoned with capitalized text: UNITED AGAINST ENBRIDGE. Below the text was a picture of a salmon. The salmon and the first word, “UNITED,” were in stark, attention-grabbing white, while the other text was in black. The signs, I later discovered, were distributed for five dollars each by the “Friends of Wild Salmon,” a coalition of northern British Columbia residents – including both First Nations and non-First Nations members – working together to oppose the Enbridge Gateway Pipeline Project.1 Perhaps appropriately, then, I noticed the sign on the lawns of both Haida and non-Haida, in Old Massett, (New) Masset, and out by Towtown. The signs may have been new, but their message is one that should have become familiar to us at this point: The people of Haida Gwaii oppose “Enbridge;” that is, The Enbridge Northern Gateway Pipelines Project. The project, first proposed in the mid-2000s, seeks to construct two pipelines to transport crude oil and condensate from northern Alberta to Kitimat on the coast of British Columbia.2 The oil would then be transported via “super-tanker” from the coast, through the Hecate Straight that passes between the west coast and the islands of Haida Gwaii before being exported to other nations (particularly China). Enbridge has received heavy support for the project from Canada’s current Conservative government, headed by Prime Minister Stephen Harper, and in 2013 the Enbridge Joint-Review Panel – despite the words of hippies and Haida alike, alongside fierce opposition from all over the northwest coast - approved the pipelines, albeit with 209 required conditions.3 As a partnership between Canadian federal and corporate interests, the Enbridge Pipelines Project promises a future horizon of economic prosperity, one that unequivocally justifies any environmental risk in the present. On Haida Gwaii, Enbridge presages a rather different future, one in which the unpredictable waters of the Hecade Straight all but guarantee a tanker spill. Such a spill would devastate the waters and lands of the islands and the neighbouring coastline of British Columbia, destroying the fish and poisoning the plants that currently draw on ocean waters and the animals that feed thereon. Neither eagles nor ravens could survive, living as they do on a diet that consists primarily of marine life, a fact which all but guarantees the disappearance of Eagles and Ravens, the Haida people whose lifeways as such are so fundamentally tied to the islands of Haida Gwaii. Haida Gwaii could no longer be home. A song recorded in protest again Enbridge by Aboriginal artist Kinnie Starr and animated as a music video by Haidawood, a team of Haida and non-Haida stop-motion artists and animators, makes this threat explicit, asking in its opening lines “Who will save these waters, save them for our great granddaughters, save them for our great grand-daughter’s sons, […] save them before all is dead and gone?”4 This nightmare future, this future that is no future, is one that looms large over the whole of this dissertation. It is familiar because it is a reiteration of the horror of ecological cataclysm that the CHN formed itself in opposition against, that the “hippies” risk metonymically bringing about by taking from the lands and waters without respect. But it is also familiar because in a broader sense it is the future that settler colonialism attempted to give to Native peoples; indeed, to render as their already given destiny. This is the future of indigenous erasure, of ultimate disappearance, of a closed temporality which can only end in “all dead and gone.” As I have also hopefully shown in each of my chapters, however, the future of “no future” is never taken as inevitable or already determined by Haida people. The work of future-making instead always acts to ward off the nightmare future of Haida erasure, always puts in its place instead multiple possible futures in which Haida people continue. Take the blue signs on the lawns of the Masset(t)s, Old and New, implicitly answering Kinnie Starr’s question with the bold declaration that the islands (will) stand “UNITED” against Enbridge. But the social significances of these futures are never encompassed solely by the ways in which they respond to the threat of nightmare futures. As we saw in Chapter 3, for instance, the production of a future of Haida and non-Haida unity is considerably more complicated than the declaration of shared solidarity, speaking back to a particular history of Haida and settler relations and fantasy schemas, looking forward towards finding productive ways in which non-Haida can be integrated into Haida systems of sociality and responsibility. To speak of a future united against Enbridge is thus necessarily to speak of many other things, just as it is the case when speaking of a future of Haida return, a future of care-full leadership, or a future of traditional authority. Larger social worlds unfold out of the constitution of particular futures. This is why, more than anything, I want to make clear in the final, concluding chapter of this dissertation that the political (if not the existential) significance of Haida future-making does not lie simply in the specific ways in which individual futures respond to particular dilemmas of the settler colonial present. Rather, what is most crucial about future-making as a way of thinking out from within the temporal brackets of settler colonialism’s deferred erasure is simply the fact of future-making itself. What matters the most is the capacity to say, as Haida rapper Ja$e ElNino does in a guest appearance in Starr’s song, “Now expect the best from the northwest/ What’s next? Just guess.” ElNino asserts the openness of the future, challenging his listeners to even attempt to predict the field of possibilities still to come. This does not mean, though, that this openness is unmoored. Quite the opposite, ElNino asks us to “expect the best of the northwest,” in response to the threat of Enbridge and, I think, more generally. In this spirit, in what follows I highlight the significance of location to indigenous futurity, exploring how Old Massett, its neighbouring communities along Masset Inlet, and the lands and waters of Haida Gwaii act as locations around which the very openness of Haida futures can be articulated. My discussion will be largely synthetic, reading together my previous chapters to attempt to arrive at a few conclusions for this dissertation at a whole. I begin with a discussion of Haida Gwaii, once again, as “home,” asking what it means to consider the islands as a Haida homeland (and one that requires “care” as such) in the light of the futures I have sketched out. I then draw on this to pose a few suggestions for the political anthropology of indigenous peoples and its abiding contemporary concern with sovereign rights and territoriality. Finally, I conclude by drawing out the multiple meanings of my titular phrase, “unsettling futures,” in the context of Haida futuremaking. Homeland Haida Gwaii is in at least some sense at the center of each of the futures I have discussed in this dissertation. It is the home to which Haida are expected (and expect) to return, the “cornucopia” of off-the-grid fantasy, the ongoing historical space of complex social and material relations that these fantasies elide, the perpetually at risk ecological landscape which demands (and authorizes) the CHN’s care and respect. And, as we have seen, these various futures for the islands are not isolated from one another. Quite the opposite, futures proliferate in response to each other. The potential for non-Haida homing necessitates strategic forms of future-oriented social integration to bring these new arrivals into respectful relations with the Haida world, the nightmare non-future of ecological collapse is warded off by the attempt to constitute care-full futures under Haida control. What all these Haida futures have in common – at least as they relate to the islands - is that they work to preserve Haida Gwaii, and the community of Old Massett in particular, as spaces in which Haida futures remain possible. This fact, as I have already begun to suggest in Chapter 2, might help us to resolve some of James Clifford’s dilemmas in relation to indigenous mobility. As I pointed towards then, the notion that “place” is significant to indigenous peoples – politically, socially, affectively, culturally – has become one of the essential components of how “indigeneity” is understood as a global phenomenon and a strategic identity from which rights claims can be advanced. Take Article 25 of the Universal Declaration of the Rights of Indigenous Peoples: Indigenous peoples have the right to maintain and strengthen their *distinctive spiritual relationship* with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard (Assembly 2007:10, emphasis mine). But what precisely does it mean to have a “distinctive, spiritual relationship” to a place, and who determines what might constitute that relationship? Here one of the perils of Povinelli’s “cunning of recognition,” as indigenous rights to territory become conflated with - and evaluated against - essentialized settler notions of Native ecological spirituality and/or emplacedness (cf: Raibmon 2005; Nadasdy 2003). If indigeneity thereby takes on the significance of being “rooted” in a particular place, of having certain identifiably “distinctive” cultural relationships to that place that others might lack, then the fact of indigenous mobility would indeed pose a profound dilemma for the category of indigeneity on the one hand and the capacity to make claims to territorial rights *qua* one’s indigeneity on the other. But there is a remarkable temporal shallowness to all this. To give a representative example, the Australian state criteria for what constitutes “cultural rights to territory” that Povinelli interrogates function solely in the past and the present, mandating that Aboriginal people show continuity of occupation and of the cultural practices associated with “Aboriginal occupation” in the mind of the court in order to be recognized as possessing a rightful claim to their home territories (Povinelli 2002). Erased in this is the possibility that a territory could be the site of departure and return, that it could have a future horizon that is flexible, subject to transformation alongside the transformations of the people(s) who call it home, without thereby necessarily losing its integrity as a rightful space of indigenous occupation. Such a possibility is not controversial for my Haida interlocutors. Rather, it has the status of an already-given certainty, community common sense - though there is without doubt much social work that goes into the production of that certainty. What makes indigenous mobility fraught, then, might have rather more to do with the constitution of settler polities than it does with the actual practices of indigenous peoples. Consider the various ways in which we have already seen colonial authorities attempt to control Haida movement, from the forced expulsions of 19th century Victoria to the removal of Haida children from the islands for residential schools less than a century later. Consider too the manufacture of the reserves themselves, the fixing of two Haida “Bands” with their own federally determined territories, beyond which Haida people could claim no rights over land, waters, or resources (cf: Harris 2002). This is a logic of containment, of isolation. In leaving their assigned spaces, Native peoples were assumed by colonial authorities to be leaving the space of their Nativeness behind, assimilating into settler society on its terms. Indeed, this was the motivating logic of the residential schools program, which took as its premise the idea that “Indians” could always “backslide” into “savage customs” as long as they remained in their homes and with their families. Aboriginal children thus had to be brought somewhere else to learn how to join “civilized,” that is, white Christian, society (Miller 1996). Reserves could thus be rendered as the last bastions of a “weird and waning race,” to quote Scott, their inhabitants temporally foreclosed and spatially fixed. The notion that indigenous people could move without ceasing to be (or ceasing to fight for their rights to self-determination and Title to their lands) unsettles this narrative, just as does the intertwined possibility of indigenous futurity. The relationship to Haida Gwaii that we’ve seen sketched out by the Haida futures explored in this dissertation does not preclude the possibility of “distinctive spiritual relationships” between Haida and their home territories. Quite the opposite, the ineffable quality of homing alone suggests that many of my interlocutors feel a connection to their home that goes beyond the kinds of practices that are only possible on the islands, their beauty or their history. Indeed, when considered as home, when considered as a site that requires care, there is little doubt that Haida Gwaii can encompass a wide range of phenomenological, affective, social, and cultural ways of relating to its lands and waters by Haida people (and their neighbours, at times for good, at times for ill). But it is not these relations as such that encompass the totality of Haida Gwaii’s significance. Rather, what is of greatest concern to my interlocutors is the continuing future possibility that relations like that *could be* formed, that people *could continue* to be called home to Haida Gwaii once they’ve fully explored the world off-island, that the qualities that precisely *make* Haida Gwaii home *could* be preserved. This is what it means, I think, to “take care” of Haida Gwaii, to allow it to continue as a homeland for uncounted future generations. Though they certainly emphasize the need for Haida Gwaii to be maintained as a location for Haida futurity, this does not mean that the futures we have seen expend all the possible ways in which such future forms of Haida social, material, ecological, and relational life could be formed. Recall Ja$e ElNino’s challenge of a future so open that its possible contents can only be guessed at. What Haida future-making demonstrates is that there are a set of potentialities which are worth protecting so that Haida people can continue to access them, to come home to them, even as continuing forms of mobility and political processes can also shape and reshape Haida social and cultural life on and off the islands. Homeland is not a regimented place where Haida people *must* always live in order to be authentically Haida. Rather, it is a location where they should always be able to, in their own (necessarily multiple, often contested, sometimes even contradictory) terms. Sovereignty At the same time, there is an inescapably political dimension to the attempt to render Haida Gwaii as the homeland of a still open Haida future. The assertion of the (located) openness of the future does not necessarily make it so. As I noted in the first part of this dissertation, the flow of Haida departures and returns unfold in the broader context of the settler, capitalist state; indeed, they are made necessary in part by the current absence of economic opportunity on island, just as the arrival of potentially threatening strangers is a result of their privileged position in the very capitalist economy they seek to escape. Constituting futures in which Haida people have the freedom to engage with that economy (and settler society more generally) as they see fit while retaining the capacity to come home (complicated as that process might be) also reiterates the inescapability of some form of engagement with that socio-economy. Likewise, the notion of Haida Gwaii as Haida homeland cannot be separated from current Haida struggles to assert their rights to the lands and waters of Haida Gwaii, the resources found therein, and their sovereign capacity to govern themselves and the islands in the ways they find appropriate. This is, recall, the very crux of the CHN’s own commitment to the assurance of futurity, as it is only by positioning itself as the rightful, sovereign government of the Haida Nation and its homeland of Haida Gwaii that it can adequately care for the islands and protect them from external threat. And the continuing advance of the Enbridge project despite fierce opposition from CHN, the Old Massett Village Council, their Haida constituents, and the non-Haida actors with whom they are “united against Enbridge” (and this alongside protest all over the northwest coast) gives the nightmare futures of environmental collapse – pushed through by corporate interests and Canadian politicians - a frightening immanence. The assertion of the openness of the future is made, in short, in (and against) a context in which closures remain endemic. And yet, something has changed in this landscape from the initial erasures of Native futurity we drew out in the first chapter. In the narratives of colonial actors like Duncan Campbell Scott, it was absolutely clear that “Indians” were disappearing because their social worlds were being superseded by more “civilized” ways of living and being, ones that these Native subjects would also, inevitably, in the end, adopt (or failing that, perish outright). There was a future. It was simply a settler one. But the nightmare futures of that my Haida interlocutors ward against in their own future-making reach beyond Haida life alone. Environmental collapse, most dramatically, threatens the sustainability of all life; toxins in the land and the waters threaten human lives regardless of their relative indigeneity, race, or gender (e.g. Choy 2011; Crate 2011). Put another way, the impetus for non-Haida (and non-First Nations subjects more generally) to be “united against Enbridge” with their indigenous neighbours comes in no small part because an oil spill also profoundly threatens the lives and livelihoods of non-Aboriginal coastal residents, a fact which Masa Takei, among others, made clear in Chapter 3. Nor is the anxiety that young people might abandon their small town to pursue economic and educational advantage in an urban context limited to reserve communities. Instead, the compulsions of capitalist economic life compel such migrations throughout the globe. The nightmare futures that Haida people constitute alternative futures to ward against are not just future of indigenous erasure under settler colonialism. They are erasures of settler society itself. There is thus an extraordinary political claim embedded in Haida future-making, a claim which gains its power precisely *because* Haida future-making as we have seen it does not (perhaps cannot) escape from the larger field of settler-colonial determination. Instead, in Haida future-making we find the implicit assertion that Haida people can make futures that address the dilemmas of Haida *and* settler life alike, ones that can at least “navigate,” to borrow Appadurai’s phrasing, towards possible futures that do not end in absolute erasure. If Povinelli and Byrd are correct and settler liberal governance makes itself possible and legitimate through a perpetual deferral of the problems of the present, then part of the power of Haida future-making is to expose the threatening non-futures that might emerge out of this bracketed present, to expose as lie the liberal promise of a good life always yet to come and to attempt to constitute alternatives. It is no coincidence that we find this in the midst of a struggle over sovereignty. And this not just in the sense of the Council of the Haida Nation’s ongoing assertion of its sovereign right to govern the lands and waters of Haida Gwaii on behalf of all Haida people, as we saw in Chapter 5. Rather, as Joanne Barker has argued, over the course of the latter half of the twentieth century sovereignty has emerged as a: particularly valued term within indigenous scholarship and social movements and through the media of cultural production. It [is] a term around which analyses of indigenous histories and cultures were organized and whereby indigenous activists articulate their agendas for social change (Barker 2005:18). Through the assertion of sovereignty, indigenous political leaders, activists and scholars refute “the dominant notion that indigenous people [are] merely one among many ‘minority groups’ under the administration of state social service and welfare programs.” Instead, “sovereignty defines indigenous people with concrete rights to self-government, territorial integrity, and cultural autonomy under international law” (18). The trouble is, of course, that indigenous claims to sovereignty are always made within the context of colonial nation-states, ones whose own legitimacy is put at considerably risk both by the prospect of self-determining indigenous Nations (re)-emerging within their boundaries and the troubling of their own historical narratives of sovereign rights (cf: Comaroff and Comaroff 2003b). (One of these narratives, which reinterpreted indigenous lands as *terra nullius* and thus open to occupation, we’ve encountered already in Chapter 3). Thus, while sovereignty might indeed “define” indigenous peoples with concrete rights to territorial Title and self-determination, in theory equal under international law to the states who also lay claim to their territories, that definition does not in and of itself make possible the *practice* of this sovereignty. In this regard settler states such as Canada have shifted in their response to First Peoples’ sovereignty claims from outright rejection to a set of policies of selective recognition,5 but even the latter still positions Native nations as being subject to the authority and oversight (if not the structural forms) of the state. This means, as we have seen in Chapter 5, that indigenous governments such as the Council of the Haida Nation are in a precarious position, attempting to constitute their own sovereign authority without access to many of the conventional means of sovereignty in Western political thought – e.g., the monopoly on legitimate violence (Weber 1946), decisive authority to make and enact law (Schmitt 2005), or exclusive territorial control (Brown 2010; cf: Hobbes 1994). Alongside this precarity is the equally anxious question of whether or not sovereignty is even an appropriate analytical to center indigenous rights around precisely because it is historically a Western concept, one that had been drawn on to dispossess indigenous peoples over the course of settler colonial history (Barker 2005:18–19). (Indeed, the very next essay in Barker’s edited volume, by Mohawk scholar Taiake Alfred, categorically rejects sovereignty as an inappropriate tool for indigenous political assertions for these reasons and, also, because it draws attention away from developing and furthering “genuinely” Aboriginal political modes of thought (Alfred 2005; cf: Alfred 2009). The fact that sovereignty remains such a preeminent concept in the struggle for indigenous rights even though it is both epistemologically problematic and politically constrained has meant that there has been a recent push in both anthropology and indigenous studies to “widen” the definition of sovereignty, so that it might encompass multiple forms of indigenous social, political and legal practice outside of the conventional purview of “sovereign power” (e.g. Cattelino 2008; Richland 2011; Simpson 2000; Simpson 2014). Or, as Joanne Barker puts it: There is no fixed meaning for what *sovereignty* is – what it means by definition, what it implies in public debate, or how it has been conceptualized in international, nation, or indigenous law. Sovereignty – and its related histories, perspectives, and identities – is embedded within the specific social relations in which it is invoked and given meaning. How and when it emerges and functions are determined by the “located” political agendas and cultural perspectives of those who rearticulate it into public debate or political document to do a specific work of opposition, invitation, or accommodation. It is no more possible to stabilize what *sovereignty* means and how it matters to those who invoke it than it is to forget the historical and cultural embeddedness of indigenous peoples’ multiple and contradictory political perspectives and agendas for empowerment, decolonization, and social justice (Barker 2005:21, emphasis original). The opening up of sovereignty as flexible, multiple, and subject to all manner of diverse rearticulations carries particular weight (and, perhaps, ambiguity) since, as a historical concept in Western political theory, sovereignty was overwhelmingly concerned with closure. As Wendy Brown argues in her Walled States, Waning Sovereignty, the classic vision of sovereign power rests in the capacity to divide the inside from the outside, to make borders around a people – a “nation” – and separate that people from those outside it. Thus Schmitt’s “friend-enemy” distinction, for instance, or even John Locke’s consistent preoccupation with fences as a way of marking the existence of territory (Brown 2010; cf: Schmitt 1996; Locke 1988). The historical conditions of indigenous sovereignty claims in the context of settler colonialism make such absolute closures impossible for indigenous peoples. We might add, though, that their persistent presence also challenges the closure of the settler nation-state. Indeed, this is part of Brown’s point. The very fact that we see ever more spectacular performances of sovereign power on the part of contemporary nation-states – e.g., the titular “walls” that are being constructed along the borders of an increasing number of states - is a sign of the very insecurity of their political authority (Brown 2010).6 The conditions of settler colonial sovereignty, in other words, may be rather more “open,” and thus closer to those of indigenous “nation-within-nations,” then they may at first appear. If this means, in turn, that the future of settler political life is becoming as uncertain as the future for indigenous life has always been since the advent of settlement, then this means only what we have already begun to see: the dilemmas that Haida people confront in their future-making practices are also the dilemmas facing settler society. Take Chapter 4, in which the absence of any “one” definitive governing entity compels the constitution of an aspirational framework of accountability which could, were it realized, render navigable Haida relations to the many governments that claim their loyalties. As I hinted at there, such dilemmas are not restricted to the Haida sociopolitical world; rather, they may in fact be endemic to contemporary democratic societies and the multiple forms of governance (licit and otherwise) that emerge therein. In suggesting that there are Haida ways of refiguring a shared Haida-settler set of contemporary problematics, we might think of Haida future-making as simultaneously an instantiation of the multiple, flexible and always contingently located practices of sovereignty to which Barker points and a different way of thinking about indigenous political potentiality. In the former sense, Haida future-making is without doubt concerned with carving out spaces in which Haida existence can continue, expand, and change without losing the capacity to reproduce itself as, precisely, Haida existence. Thus the processes of homecoming we explored in Chapter 2, or Chapter 5’s explicitly political attempts to establish control over the islands for future generations. If the absence of indigenous sovereignty is the absence of the capacity of an indigenous people to (self)-determine their own futures, then the constitution of Haida futures can be seen exactly as sovereign work, whether in the overt sense of the Council of the Haida Nation’s assertions or the somewhat more implicit mode of Alice Stevens’ proposed mass adoptions. Significant here, though, is the fact that these acts of future-making carry meanings beyond their status as “responses” to the social and political dilemmas of contemporary Haida life. Thus Alice Stevens’ adoptions bring “hippie” children into the framework of Haida kinship relations, in one sense neutralizing their potential threat, but also constituting a complex new network of social relations between Haida and non-Haida whose potential significances go well beyond the protection of Haida territory and resources; thus the Council of the Haida Nation emerges as a “state-like” governing entity through its authorizing promise to “take care” of the islands, but in so doing takes on a series of new roles in Haida political life whose full consequences remain to be seen. If it is a sovereign action to envision an opening of possible futures for Haida people, then this very openness might also exceed the boundaries of sovereignty as a problematic for indigenous people even as it responds to them. Which is also, perhaps, why Haida futures seem so consistently to sketch out social, ecological, and political fields that encompass non-Haida; more, that are futures for Canada as well as for the Haida people living within the nation-state’s borders. Or, at least, futures that have the capacity to be so. What would it mean to figure an indigenous sovereignty that speaks beyond itself, one that promises to invert the order of settler domination through reconfiguring the shared futures of indigenous and settler peoples? This would not be a sovereignty premised on territorial closure, or even absolute political autonomy. It would, however, decisively overturn any settler colonial anticipations of the inevitable erasure of Native peoples. Quite the opposite, it would position indigenous practices of anticipation, aspiration, certainty, and anxiety at the forefront of contemporary modes of political imagination. Unsettling Futures A question remains, however. Could such a refiguring of the temporal and political horizon of settler and indigenous relationships remain possible even if the futures that indigenous people work to constitute remain unrealized in the settler colonial present? Or, put another way, we must always be careful not to conflate a capacity *to* form new futures for settler nation-states with the actual materializations of these futures. The Haida futures that I have discussed, even as they promise possible ways of navigating – of restructuring, even – the settler-Haida present, remain firmly bound by the colonial constraints of this present. But perhaps the stakes here have never been about overthrowing the Canadian colonial order outright. Rather, what I hope this dissertation has shown is that Haida future-making has the capacity to *unsettle* the settler colonial present, to challenge its received categories and demonstrate how, slowly, gradually, Haida people are reconfiguring its terms through the work of producing the future. Certainly, the sheer fact of Haida futurity should put to the lie any further notion that Haida people exist only to replicate their past or live only in the deferral of their eventual disappearance. The future is alive and well in Old Massett, although this does not meant that it is not also a site of profound anxieties. In working to ward off those anxieties through the juxtaposition of nightmare futures against their more desirable alternatives, then, Haida people unsettle the epistemological foundations of the forms of settler colonialism and liberalism against which Byrd and Povinelli write. At the same time (if you’ll pardon the pun), I think we can see the social work that futuremaking does iteratively, as a gradual reshaping of the actual conditions of Canadian society. Here I borrow Judith Butler’s suggestion, following Foucault, that the regulatory norms of society function only through their consistent and unstable reiteration (and materialization) in everyday social life.7 From this perspective, the ways in which Haida people work within and even reiterate the constraints and demands of Canadian settler mainstream society can also slowly and strategically *shift* those very constraints and demands, materializing a HaidaCanadian future that might in fact be quite different from the present even as it does not ever fully “escape” from its dilemmas. Perhaps the most unsettling potential of all here lies simply in the ways in which Haida people incorporate the conditions of the settler colonial present as being paths towards Haida futures. Not vanished, or vanquished. Ongoing.

# 2NC

## T --- Courts

### 2NC --- O/V

#### 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)

## Case

### 2NC --- Market Turn

#### Specifically --- Farming is decentralized AND a wave of competition’s coming

Sara Spaventa 20, MA from Durham University, BA in Applied Science from the University of California, San Diego, “Myths Debunked About Farmland”, Farm Together, 8/18/2020, https://farmtogether.com/learn/blog/myths-debunked-about-farmland

Myth #1: Farmland is controlled by big corporations and the wealthy.

Historically, farmland hasn’t always been available to anyone as an investment opportunity. But, that’s not due to a stigma tied to risk or wealth. Instead, it’s because of a lack of access. Farmland has traditionally stayed within the family, being handed down from generation-to-generation.

With growing concerns over factory farming and a continuous decrease in arable land, the question of who owns America’s farmland often arises: families own 97% of US farmland. However, with the average age of farmers approaching 60, and younger generations exploring different career routes other than the taking over the family business, more farmland is entering the market. Experts anticipate 25% of farmers and ranchers will retire by 2030 and roughly one-third of US farmland and ranch land will likely change hands in the next 15 years.

This boom in land ownership transfers and the introduction of investing technology like FarmTogether allow for the democratization of farmland ownership. With modern farmland investing, anyone can invest in farmland and have a say in what practices are being used.

#### It causes lock in which makes entry into the market impossible

**Weiner, 13** (Robert Weiner, Dr. Robert J. Weiner teaches international finance, economics, and strategy. He received his PhD in 1986, and has been at GW since 1994, Jan 2013, accessed on 10-29-2021, Chamberlitigation, "Brief of economists as amici curaie in support of respondants bowman", https://www.chamberlitigation.com/sites/default/files/scotus/files/Economists%20amicus%20brief%20-%20Bowman%20v.%20Monsanto%20Co.%20%28U.S.%20Supreme%20Court%29.pdf)//Babcii

3. Applying exhaustion could raise barriers to entry and reduce the competitiveness of seed and trait markets.

A **shift from an annual licensing** model for seeds and traits **to a higher single upfront fee** will likely lead to increased concentration in the seed and trait markets, leading to higher prices and reduced output.

Forcing farmers to choose a perpetual license would tend to **create a “lock-in” effect that would make seed markets less competitive**. After farmers have paid their upfront fee for a perpetual license, **their incremental cost** to save and replant seed **would be quite small**, particularly **in comparison to the large upfront fee that another seed company would demand** for the perpetual right to plant its competing seed.

‘**This price disparity would deter farmers from doing business with a new seed company after the initial choice of seed**, raising barriers to new entry and tending to lock in place the current market posi- tions of seed companies. It is difficult for firms to compete with the “**almost free**” cost of planting the incumbent's soybeans after a farmer has paid the initial license fee, even if they have developed su- perior new varieties and priced them aggressively. Cf. Richard Gilbert & Carl Shapiro, Antitrust Issues in the Licensing of Intellectual Property: The Nine No- Nos Meet the Nineties, BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 283, 310-11 (1997) (describing economic theory underlying De- partment of Justice challenge to Microsoft’s use of per-processor license fees, in which OEMs paid for Microsoft software whether they used it or not).

#### Seed companies would have to treat small farmers and universities as potential threats --- That destroys their ability to innovate

**Weiner, 13** (Robert Weiner, Dr. Robert J. Weiner teaches international finance, economics, and strategy. He received his PhD in 1986, and has been at GW since 1994, Jan 2013, accessed on 10-29-2021, Chamberlitigation, "Brief of economists as amici curaie in support of respondants bowman", https://www.chamberlitigation.com/sites/default/files/scotus/files/Economists%20amicus%20brief%20-%20Bowman%20v.%20Monsanto%20Co.%20%28U.S.%20Supreme%20Court%29.pdf)//Babcii

2. Applying exhaustion could lead to a reduction in procompetitive outlicensing. As discussed above, if the first seed sale exhausts patent rights, absent viable contractual protections a seed or trait developer would need to charge the full value of its traits up front. Currently developers are able to price the use of their traits or seed germplasm differently for different kinds of rights and different intensities of use. For example, the fee charged to a university for a research license will differ from the fee charged to a competing seed company for the right to incorporate a patented trait in their seed or breed with patented germplasm, and both of these fees **will differ from the license fee paid by a farmer who wishes to grow a single commercial crop**. Such price discrimination based on intensity of use is generally considered **pro-competitive** since the licensee values use of the patent in rough proportion to the benefit it gains.

Difficulty in metering the intensity of use by commercial licensees will act as a disincentive to out- license. **If a first sale exhausts rights** in traits or germplasm, outlicensing to a small competitor or university poses the same commercial risks to the licensor **as outlicensing to a large competitor**, because any of these licensees will be able to flood the market with seed containing the innovator’s intellectual property without incremental payments to the inventor. In such a world**, a rational innovator will raise prices to small firms or universities that seek a license, thus reducing the ability of small firms and universities to engage in complementary innovation.**

### AT: Dalley

#### 2. Dally is wrong – native subjectivity’s not immutable

Alex Trimble Young & Lorenzo Veracini 17. Alex Trimble Young is an honors faculty fellow in the Barrett Honors College at Arizona State University. He serves on the editorial collective of the interdisciplinary journal Settler Colonial Studies. Lorenzo Veracini is at the Swinburne University of Technology in Melbourne, Australia. His research focuses on the comparative history of colonial systems. He has authored Israel and Settler Society (2006), Settler Colonialism: A Theoretical Overview (2010), and The Settler Colonial Present (2015). Lorenzo is coeditor of The Routledge Handbook of the History of Settler Colonialism (2016) and editor in chief of Settler Colonial Studies. 2017. “‘If I Am Native to Anything’: Settler Colonial Studies and Western American Literature.” Western American Literature, vol. 52, no. 1, pp. 1–23.

Apprehending this history as what Jodi Byrd has called the “transit” over which the international “postwestern” cityscape of Las Vegas is realized leads us into a reading of a very different type of frontier than the one memorialized on Fremont Street (Transit xv). Read this way, as a site of Indigenous dispossession, the West cannot be seen as a dynamic site of pure possibility, as Gilles Deleuze and Félix Guattari have represented it, as “a rhizomatic West, with its Indians without ancestry, its ever- receding limit, its shifting and displaced frontiers” (19). The repetitive revisitation of frontier tropes recalls what critic Hamish Dalley calls “the frozen temporality of settler- colonial narrative,” which, “fixated on the moment of the frontier, recalls nothing so much as Freud’s description of the ‘repetition compulsion’ attending trauma” (Dalley). The “hyperreal West” in this context emerges as a fantasy (Lewis 194), in the sense that theorist Jacqueline Rose describes in her work on Israel/Palestine. “Never completely losing its grip, fantasy is always heading for the world it only appears to have left behind” (3).5 Of course settler colonialism is but one of the “secret histories of Las Vegas” that underwrite the postmodern wonderland visitors fi nd on Fremont Street and the strip, and but one of many structures of violence that shape life in the contemporary western United States.6 Nonetheless, it remains a structure central to the consideration of “westness.” As the postwestern critics argue, “westness” is neither contained by geography (as the popularity of the Western genre internationally attests), nor necessarily representative of cultural production being produced within the western United States (Kollin x– xi). When we speak of a cultural production as “Western,” we are speaking of a work that addresses the process and consequences of settler conquest, whether we are discussing a California memoir, an Australian novel, or an Italian fi lm.7 This is not to say that Western cultural production is always a result of settler colonial ideology, but rather that it is engaged with questions pertaining to it. Th e problem of the West is, in a crucial sense, the problem of settler colonialism. Imagining postwestern futures thus requires a critical outlook that is more than just inclusive in its politics, transnational in its scope, and poststructuralist in its methodology. Our movement toward the “post” in the conceptual space of the Western must be decolonial in its orientation. Such a critique would abandon unilateral settler attempts at postnational place-making in order to critique settler colonial structures of violence. Such a critique would not work to reify these structures as permanent or inevitable, but rather to probe their contradictions, and to promote the Indigenous intellectual traditions that have long been at work critiquing the settler colonial present in order to shape a decolonial future.8 We hope that this special issue of Western American Literature, which features critical readings of western American film and literature by three scholars from different fields and national backgrounds, can contribute toward this effort.

# 1NR --- Swing 2 R4

## 1NR --- Econ

#### Massive consumer spending and confidence secures growth even through upcoming uncertainty

Entenmann, 1-3 (Kenneth J. Entenmann is chief economist and chief investment officer at NBT Wealth Management, “Despite labor constraints and inflation, cautious optimism expressed for 2022”, Hartford Business, 1-3-22, https://www.hartfordbusiness.com/article/despite-labor-constraints-and-inflation-cautious-optimism-expressed-for-2022)//babcii

The term “cautiously optimistic” comes to mind with the seemingly collective reservations regarding supply chains and labor — and I have to say I agree with the sentiment. I think you’re on to something, Connecticut.

The 2021 economy fought through significant challenges but has still improved materially. The U.S. GDP is estimated to have grown by 5.6% in 2021 and the consensus forecast for 2022 calls for 4.1% growth.

Both numbers are considerably better than the pre-COVID pace of 2% to 3%. So, it is more than just a positive attitude — there is good reason to be optimistic.

As a result of our collective COVID experience, consumers and companies were forced to adjust their behavior. That adjustment resulted in a great deleveraging of consumer and corporate balance sheets.

The personal savings rate skyrocketed to 35% during the initial COVID lockdown and still hovers around 10%. Many consumers took the COVID lockdown as an opportunity to pay down their debt; credit card, home equity and mortgage balances all declined significantly.

On the corporate front, a similar deleveraging has occurred. The original CARES Act provided a material safety net for companies of all sizes. Most significantly, the act created the Paycheck Protection Program that provided loans ($350 billion, mostly forgiven) to small businesses. The PPP loans allowed companies to remain solvent while adjusting to the new COVID world.

While the PPP loans provided support for revenue shortfalls and supported employment levels, non-labor expenses dropped materially. Expenses such as marketing, travel, training and development, fleet expenses and entertainment all plummeted.

Today, companies are flush with cash, expenses continue to run below “normal,” and debt has been paid down. Why is this great deleveraging important? It provides plenty of ammunition for economic growth when the uncertainties surrounding COVID diminish.

The combination of strong balance sheets, a continuing reopening of the economy and historically low interest rates provide fuel for growth and reason for cautious optimism as the economy works through a host of challenges.

#### Every sector of the economy is metro boomin

Werlin, 21 (Ernest “Doc” Werlin, 35 years in fixed income as a trader and corporate bond salesman, including time as a partner at MorganStanley in charge of corporate bond trading, “Doc’s Prescription: U.S. economic outlook for 2022”, Herald Tribute, 12-27-21, https://www.heraldtribune.com/story/business/2021/12/27/economists-expect-u-s-enjoy-solid-economic-growth-2022/9022524002/)//babcii

There is a growing consensus that the United States will enjoy solid economic growth in 2022 despite concerns about inflation, supply chain disruptions, COVID-19 and Federal Reserve tightening. [The Conference Board,](https://www.conference-board.org/topics/global-economic-outlook/global-economic-outlook-2022-global-report) a research group comprising more than 1,000 public and private corporations, forecasts that the U.S. economy will grow by 3.5% in 2022.

The main challenges to the United States and the global economy in the next decade come from a continued trend toward [deglobalization](https://www.igi-global.com/dictionary/after-the-global-crisis-is-it-globalization-or-globalonelization/47261)and faster-than-expected inflation. The transition toward decarbonization of economies in response to climate change will create challenges and opportunities for global growth.

Despite the acceleration of new COVID-19 cases in December, largely associated with the delta and omicron variants, America enjoyed strong growth in Q4 2021.

COVID-19 remains a threat but its economic impact is fading. There remains uncertainty regarding the transmissibility, severity, and effectiveness of existing vaccines against omicron. [World Health Organization officials,](https://www.who.int/emergencies/diseases/novel-coronavirus-2019) in recognition of the dangers inherent with COVID-19, are advocating more coordinated and decisive efforts to vaccinate the world’s population to prevent the emergence of new, more dangerous variants.

The Food and Drug Administration recently granted emergency authorization to Pfizer’s COVID treatment pill for patients 12 years and up with mild to moderate COVID symptoms who are most likely to end up hospitalized. The agency said it should be prescribed as soon as possible after diagnosis and within five days of symptom onset.

The United States is experiencing robust but an uneven rebound from the pandemic. Demand growth is outstripping supply growth because of unprecedented fiscal and monetary stimulus.

A consensus of economists forecast a decline in the unemployment rate from the current 4.2%. The Bureau of Labor Statistics wrote, “As the nation’s demographic shift continues, with the baby-boom generation moving into retirement, the labor force participation rate will continue to decline, moderating growth.”

The U.S. Census Bureau released a report that the U.S. population grew at a slower rate in 2021 than in any other year since the founding of our nation. This year was the first time since 1937 that the U.S. population grew by fewer than one million people.

In response to COVID-19, households have redirected their spending away from activities that are “locked-down” (food and entertainment) and toward durable goods. Governments have eased COVID restrictions because of vaccines and the ability to more precisely target and curtail certain types of activities.

On Wednesday, in a fresh sign of his growing concerns about inflation, Federal Reserve Chairman Jerome Powell said the Federal Reserve can't be sure that price increases will slow in the second half of next year. To stem inflation, we can expect the Fed to stop bond purchases and raise interest rates three times in 2022.

## 1NR --- PIC

### 2NC --- NB

#### 1. Toxic waste causes extinction

**Cribb 17** - (Julian Cribb, Fellow of the Australian Academy of Technological Sciences and Engineering, former Director, National Awareness, CSIRO, “The Poisoner,” Surviving the 21st Century Chapter 6)

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

#### It is guaranteed

Caldicott 94 (Helen, Australian Physician, Nuclear Madness, p. 21)

As a physician, I contend that nuclear technology threatens life on our planet with extinction. If present trends continue, the air we breathe, the food we eat, and the water we drink will soon be contaminated with enough radioactive pollutants to post a potential health hazard far greater than any plague humanity has ever experienced. Unknowingly exposed to these radioactive poisons, some of us may be developing cancer right now. Others may be passing damaged genes, the basic chemical units that transmit hereditary characteristics, to future generations. And more of us will inevitably be affected unless we bring about a dramatic reversal of the world’s pronuclear policies.

#### 2. Nano solves human mortality

**Gaudin 9** (Sharon Gaudin is a science writer at Worcester Polytechnic Institute and an experienced technology reporter. Citing Ray Kurzweil, received the 1999 National Medal of Technology and Innovation, the United States' highest honor in technology, inducted into the National Inventors Hall of Fame, established by the U.S. Patent Office, received 21 honorary doctorates, BS in Computer Science from MIT. <KEN>"Nanotech could make humans immortal by 2040, futurist says," Computerworld. October 1, 2019. DOA: 1/1/20. https://www.computerworld.com/article/2528330/nanotech-could-make-humans-immortal-by-2040--futurist-says.html)

In 30 or 40 years, we'll have microscopic machines traveling through our bodies, repairing damaged cells and organs, effectively wiping out diseases. The nanotechnology will also be used to back up our memories and personalities.

In an interview with Computerworld, author and futurist Ray Kurzweil said that anyone alive come 2040 or 2050 could be close to immortal. The quickening advance of nanotechnology means that the human condition will shift into more of a collaboration of man and machine, as nanobots flow through human blood streams and eventually even replace biological blood, he added.

That may sound like something out of a sci-fi movie, but Kurzweil, a member of the Inventor's Hall of Fame and a recipient of the National Medal of Technology, says that research well underway today is leading to a time when a combination of nanotechnology and biotechnology will wipe out cancer, Alzheimer's disease, obesity and diabetes.

It'll also be a time when humans will augment their natural cognitive powers and add years to their lives, Kurzweil said.

"It's radical life extension," Kurzweil said. "The full realization of nanobots will basically eliminate biological disease and aging. I think we'll see widespread use in 20 years of [nanotech] devices that perform certain functions for us. In 30 or 40 years, we will overcome disease and aging. The nanobots will scout out organs and cells that need repairs and simply fix them. It will lead to profound extensions of our health and longevity."

Of course, people will still be struck by lightning or hit by a bus, but much more trauma will be repairable. If nanobots swim in, or even replace, biological blood, then wounds could be healed almost instantly. Limbs could be regrown. Backed up memories and personalities could be accessed after a head trauma.

#### 3. AND --- Solves warming

**Aithal & Aithal 18** (Dr. P. S. Aithal – Director, Srinivas Institute of Management Studies, Srinivas University. Dr. Shubhrajyotsna Aithal – Assistant Professor, College of Engineering & Technology, Srinivas University. <KEN> “Nanotechnology based Innovations and Human Life Comfortability –Are we Marching towards Immortality?” International Journal of Applied Engineering and Management Letters (IJAEML), (2018), 2(2), 71-86. DOA: 1/1/20. <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3289262>)

Experts all over the world are in consensus that one of the major factors that will determine the future of human health is the health of our environment and the planet. In the environmental sciences, nanotechnology is a very hot topic, especially when addressing environmental sustainability and reversal of environmental damage caused by the actions of mankind. Nanotechnologists alongside environmental experts have been able to utilize nanomotor degradation and removal of contaminants from water sources. Environmentalists are excited about the use of this technology for water quality monitoring and eventually would like to see “sense and destroy” applications. Future directions in this field even entail immunology influenced chemotactic abilities capable of allowing nanomachines to track contamination back to its source for clearance and reporting to the appropriate authorities. In environmental applications of nanotechnology, a kind of nanorobots called nanomachines can self-replicate under pre-determined, set conditions, can potentially help people to control the changes in the environment. Nanorobots can be programmed to act like a buffer to prevent environmental changes, and help to maintain predetermined temperatures and pressure conditions. Nanomachines also have the ability to act like a chemical factory to process excessive levels of CO2 from the air or produce nontoxic endothermic or exothermic reactions to heat or cool the environment. Thus, nanomachines can be used to cool the oceans to prevent further melting of artic ice. The light reflective properties of nanomaterials added to the oceans can be altered and hence by decreasing or increasing the oceans ability to absorb sunlight could have considerable effects on global warming. Such possibilities for solving various environmental problems and pollutions are truly endless and exciting to for further research. Nanotechnology not only has tremendous implications for the monitoring of human health but also in real time monitoring of the environment and its purification in ways before never thought possible.

### 2NC --- AT --- 2AC 1

#### It is a “living organism” for the same reason that seeds are --- They are made of cells AND can reproduce

Iati, 21 (Marisa Iati, General Assignment reporterEducation: M.A. in Journalism and Public Affairs, American University; B.A. in American Studies, University of Notre Dame, 11-30-2021, accessed on 1-8-2022, The Washington Post, "These living robots made of frog cells can now reproduce, study says", <https://www.washingtonpost.com/science/2021/11/30/living-robots-reproduction-study/>)//Babcii

Knowing that xenobots’ shapes affect their behavior, the computer scientists then ran algorithms to figure out which form would help the organism to replicate repeatedly. They discovered that a “C” shape resembling Pac-Man from the 1980 video game series seemed to be best, and one of the biologists used microsurgical tools to carve the xenobots into that design. As the algorithms predicted, the Pac-Man-shaped **xenobots gathered individual stem cells into clusters, which became xenobots of their own**. This type of replication is based on the organisms’ movement, rather than growing and then shedding a new being **as other animals and plants do**, Kriegman said. Xenobots straddle an unusual line between living organisms and robots. **They are organisms because they are made of stem cells and can reproduce**. But they are also robots because they can move on their own and perform physical labor, Kriegman said. Although most robots are made of metal, he said robots are defined not by their material, but by what they can do.

### 2NC --- AT --- 2AC 2

#### Don’t refuse colonial technologies, repurpose them.

Paperson ‘17

[La Paperson, aka K. Wayne Yang, UC San Diego. 2017. “A Third University is Possible”. <https://manifold.umn.edu/read/a-third-university-is-possible/section/ba50806d-ff18-4100-9998-784aecb42ae4>] Pat

Everywhere land resists and refuses—whales that destroy ships, bees that refuse to work, bombed islands that reconstitute themselves. The land also resists in the form of people; Indigenous peoples’ resistance is the land’s resistance. Indigenous people continue to subvert legal and capitalist technologies as part of that resistance. And technologies and technological beings resist too.

Patent law is patently designed to favor corporations, a legal technology whose colonizing functions are particularly evident when considering how Monsanto and other GMO producing giants are patenting seeds and genes they “find” throughout the world. Yet Indigenous communities are fighting this biopiracy by refusing the systems that permit corporations to patent life and that document knowledge for expropriation in the first place, by creating digital libraries of traditional knowledges, and sometimes by subverting patent law to claim rights to their own life worlds and knowledges.

Treaties are technologies of colonial coercion and yet also of Indigenous survivance. As Scott Lyon says, an x-mark that signs the treaty “is a sign of consent in a context of coercion.... And yet there is always the possibility of slippage, indeterminacy, unforeseen consequences, or unintended results; it is always possible, that is, that an x-mark could result in something good. Why else, we must ask, would someone bother to make it?” Since 1948, the Oneida Indian Nation has pursued restoration of sovereignty over historical reservation lands via a complex set of avenues involving treaty law, U.S. courts, casinos, and excise taxes, resulting in a landmark 13,004 acres of land taken into trust by the Department of the Interior in 2014.

Sometimes settlers return land to Indigenous tribes and nations. Hopefully, they/we might do so without conditions. As I write, the Kashia Band of Pomo Indians are getting back 688 acres of coastal lands in California. I am not saying wealthy settlers who return land are decolonizing. I am saying that some colonizing technology has been hotwired; something scyborg is happening.

The truth is that any return of land is not just due to the good graces and benevolence of wealthy settlers; it is a scyborg possibility foretold by an x-mark. About Hollywood star Johnny Depp’s purported promise to buy land for Comanche, Sonny Skyhawk, a Sicangu Lakota actor and founder of American Indians in Film and Television, said, “If it’s from the heart, we accept it. If it’s not from the heart, we’ll accept it anyways.”

Developed as weapons of surveillance and assassination, drones are hard to imagine as decolonizing instruments; yet these machines we hate may serve a function before we discard them. Originally a wind-powered device similar to the childhood wind toys of its Afghani creator Massoud Hassani, the Mine Kafon drone “can autonomously map, detect, and detonate land mines” and could contribute to demilitarizing mine-filled lands within a generation. Dynamite, which left Alfred Nobel rich and many dead, and which abetted in U.S. westward imperial expansion, blew up the Elwha and Glines Canyon dams and restored the Elwha River. A giant, autonomous artificial coastline could assist the ocean to clean herself of the great Pacific Garbage Patch. Oysters made “plantable” by farming technologies detoxify the Hudson and so become too poisonous to eat, but because of them, the frogs will return. Wind-powered strandbeests—originally devised to restore Dutch beaches—now roam almost autonomous, almost free. Toxic and explosive and wind-willed machine animals, you, scyborg, might read about and feel some odd sense of recognition.

Figure out how technologies operate. Use a wrench. Technologies can be disrupted and reorganized—at least for a machine cycle. Rather than thinking of ourselves as just subjects of those technologies, think about how we are the drones, the explosives, the toxified, the operative parts of those technologies—and ideally, how we might operate on ourselves and other technologies and turn these gears into decolonizing operations.

If this sounds easy and obvious, then my writing has failed you. Listen: you will need to remember this when you are accused of destruction. Attach a pacemaker to the heart of those machines you hate; make it pump for your decolonizing enterprise; let it tick its own countdown. Ask how, and how otherwise, of the colonizing machines. Even when they are dangerous.

### 2NC --- AT --- 2AC 3/4

#### Literally no card makes this argument about bio-tech being bad and NONE of them are about why Xeno-bots are bad

#### Shiva is ONLY about seeds

Shiva 16

(Vandana – physicist, world-renowned environmental thinker and activist, Biopiracy: The Plunder of Nature and Knowledge, p. vii-xviii, shae)

I wrote Biopiracy to explore the ethical, ecological, and economic consequences of patents on life. There were no biopiracy cases yet, but it was evident that when everything is patentable, the biodiversity and indigenous knowledge of countries of the South will also be patented. **The door to patents on seed** and patents on life was opened by genetic engineering. By adding just one new gene to the cell of a plant, **corporations claimed they had invented and created the seed, the plant, and all future seeds, which are now their property**. In other words, GMO meant "God/Move Over:' Big Biotech claimed legal personhood and the role of creator. They have declared seed to be their "invention,” their patented property. A patent is an exclusive right granted for an "invention,” which allows the patent holder to exclude everyone else from making, selling, distributing, and using the patented product. With patents on seed, this implies that the farmers' rights to save and share seed-something farmers have done for millennia-is now defined as "**theft**,” an "intellectual property crime.” In defining seed as their creation and invention, corporations like Monsanto shaped the Global Intellectual Property and Patent Laws so that they could legally prevent farmers from saving and sharing seeds. This is how the Trade-Related Intellectual Property Rights (TRIPS) Agreement of the World Trade Organization was born. Article 27.3(b) of the TRIPS Agreement states: "Parties may exclude from patentability plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, parties shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof." This misnamed "protection of plant varieties" is precisely what prohibits the free exchange of seeds between farmers, threatening their subsistence and ability to save and exchange seeds amongst one another. The TRIPS clause on patents on life was due for a mandatory review in 1999. In its submission, India stated, "Clearly, there is a case for re-examining the need to grant patents on lifeforms anywhere in the world. Until such systems are in place, it may be advisable to ... exclude patents on all lifeforms:' The African group added: The African Group maintains its reservations about patenting any life forms as explained on previous occasions by the Group and several other delegations. In this regard, the Group proposes that Article 27.3(b) be revised to prohibit patents on plants, animals, micro-organisms, essentially biological processes for the production of plants or animals, and non-biological and microbiological processes for the production of plants or animals. For plant varieties to be protected under the TRIPS Agreement, the protection must clearly, and not just implicitly or by way of exception, strike a good balance with the interests of the community as a whole and protect farmers' rights and traditional knowledge, and ensure the preservation of biological diversity. Life forms, plants, and **seeds are all evolving, self-organized, sovereign beings**. They have intrinsic worth, value, and standing. Owning life by claiming it to be a corporate invention is ethically and legally wrong. Patents on seeds are legally wrong because seeds are not an invention. Patents on seeds are ethically wrong because **seeds are life forms; they are our kin**, members of our earth family. Life is Not an Invention IPRs expanded to cover living systems and organisms is a distortion of "innovation'' and "invention.” This distortion was introduced by corporations such as Monsanto in the TRIPS (Trade-Related Intellectual Property Rights) Agreement of the WTO. Corporate influence on patent law began with the drafting of the TRIPS Agreement of the WTO by the Intellectual Property Committee (IPC) of multilateral corporations. As I have written in Biopiracy, James Enyart of Monsanto is on record illustrating just how deeply the TRIPS agreement is aligned to corporate interest and against the interests of nations and their citizens: Once created, the first task of the IPC was to repeat the missionary work we did in the U.S. in the early days, this time with the industrial associations of Europe and Japan to convince them that a code was possible .... Besides selling our concepts at home, we went to Geneva where [we] presented [our] document to the staff of the GATT Secretariat. We also took the opportunity to present it to the Geneva-based representatives of a large number of countries ... What I have described to you is absolutely unprecedented in GATT. Industry has identified a major problem for international trade. It crafted a solution, reduced it to a concrete proposal, and sold it to our own and other governments ... The industries and traders of world commerce have played simultaneously the role of patients, the diagnosticians, and the prescribing physicians. Intellectual Property Rights are defined as property in the "products of the mind,” including patents. Over the last two decades, under the influence of corporations, patent laws have taken a different direction-from protecting the interests of genuine inventions and ideas to ownership of life and control over survival essentials like seed and medicine. Such monopolies violate article 21 of the Indian constitution, which guarantees all citizens the right to life. The first case in the WTO was initiated by the U.S. to force India to change its patent laws. Methods of agriculture and plants were excluded from patentability in the Indian patent act to ensure that seed, the first link in the food chain, was held as a common property resource in the public domain and that farmers' inalienable right to save, exchange, and improve seed was not violated. Only process patents were allowed in medicine. The pharmaceutical corporations, which are the same as the biotechnology corporations, are seeking absolute monopolies on seed and medicine through patents. I worked closely with the government and Indian parliament to ensure that farmers' rights and the integrity oflife forms were respected in Indian law. When India amended her patent acts, safeguards consistent with TRIPS were introduced. Article 3 defines what is not patentable subject matter. Article 3(d) excludes as inventions "the mere discovery of any new property or new use for a known substance.” This was the article under which Novartis's patent claim to a known cancer drug was rejected. This is the article that Novartis tried to challenge in the Supreme court and lost. Article 3(j) excludes from patentability "plants and animals in whole or in any part thereof other than microorganisms; but including seeds, varieties, and species, and essentially biological processes for production or propagation of plants and animals.” This was the article used by the Indian patent office to reject a Monsanto patent on climate-resilient seeds. While the Indian patent office rejected a Monsanto patent, the U.S. Supreme Court ruled on behalf of Monsanto against a farmer called Bowman who had not bought seeds from Monsanto but instead purchased soybeans from an Indiana grain elevator. The U.S. Supreme court ruling creates intellectual property in future generations of a grain or seed. This is biologically and intellectually incorrect because all that Monsanto has done is add a gene for resistance to its proprietary herbicide Roundup, to 1) claim ownership of any plant/animal that gene finds its way into and 2) to enforce a Roundup **monopoly**. Adding a gene of Roundup resistance does not amount to "inventing" or "creating" a soya bean seed, its future generations, and the species the gene pollutes. India's law titled Plant Variety Protection and Farmers' Rights Act 2001 has a clause on farmers' rights. I was appointed to be a member of the expert group that drafted the rules. A farmer shall be deemed to be entitled to save, use, sow, resow, exchange, share or sell his farm produce including seed of a variety protected under this Act in the same manner as he was entitled before the coming into force of this Act. There is no such protection for citizens and farmers in the U.S. U.S. citizens are not only being denied their right to know what they are eating, but are now being denied their right and duty to save and exchange seed. The Seed Laws of 2004 have been used in Pennsylvania, Maryland, and, now, Minnesota to shut down seed libraries. Biopiracy is Not "Innovation'' Over the past decade, corporations have gained control over the diversity of life on earth and people's indigenous knowledge through new property rights. There is no innovation involved in these cases; they are instruments of monopoly control over life itself. Patents on living resources and indigenous knowledge are an enclosure of the biological and intellectual commons. Life forms have been redefined as "manufacture" and "machines,” robbing life of its integrity and self-organization. Traditional knowledge is **being pirated and patented, unleashing a new epidemic of biopiracy.** • Patenting of Neem The patenting of the fungicidal properties of Neem was a blatant example of biopiracy and indigenous knowledge. On May 10, the European Patent Office (EPO) revoked the patent (0436257 Bl) granted to the United States Department of Agriculture and the multinational corporation W. R. Grace for a method of controlling fungi on plants by the aid of an extract of seeds from the Neem tree. The challenge to the patent of Neem was made at the Munich Office of the EPO by three entities- the European Parliament's Green Party, Dr. Vandana Shiva of RFSTE, and the International Federation of Organic Agriculture-and challenged it on the grounds of "lack of novelty and inventive step:' They demanded the invalidation of the patent ( among others) on the grounds that the fungicide qualities of the Neem and its use has been lmown in India for over 2,000 years and used to make insect repellents, soaps, cosmetics, and contraceptives. The Neem patent was finally revoked. • Biopiracy of Basmati On July 8, 1994, Rice Tee Inc., a Texas-based company, filed a generic patent (Patent No. 5663484) on basmati rice lines and grains in the United States Patent and Trademark Office (USP TO) with 20 broad claims designed to create a complete rice monopoly patent, which included planting, harvesting, collecting, and even cooking. Though Rice Tee claimed to have "invented" Basmati rice, they accepted the fact that it has been derived from several rice accessions from India. Rice Tee had claimed a patent for inventing novel Basmati lines and grains. After protests and the case in the Supreme Court of lndia, the U.S. Patent and Trademark Office struck down most sections of the Basmati patent. • Syngenta's Attempt at Biopiracy of India's Rice Diversity Syngenta, the biotech giant, tried to grab the precious collections of 22,972 varieties of paddy, India's rice diversity, from Chattisgarh in India. It had signed a MoU with the - Indira Gandhi Agricultural University (IGAU) for access to Dr. Richharia's priceless collection of rice diversity, which he had looked after as if the rice varieties were his own children. The mass agitation by the peoples' organization, farmers' unions, civil liberty groups, women's groups, students' groups, and biodiversity conservation movements against Syngenta and IGAU bore results, and Syngenta called off the deal. • Monsanto's Biopiracy of Indian Wheat European Patent Office in Munich revoked Monsanto’s patent on the Indian wheat variety called Nap Hal. Monsanto, the biggest seed corporation, was assigned the patent (No. EP 0445929 Bl) on wheat on May 21, 2003, by the EPO under the simple title, "plants:' On January 27, 2004, The Research Foundation for Science, Technology and Ecology along with Greenpeace and Bharat Krishak Samaha filed a petition at the EPO challenging the patent rights given to Monsanto that led to the patent being revoked. • ConAgra's Bio piracy Claim on Atta (Wheat flour) Atta, a staple food and ingredient within India, is currently under threat from the corporation ConAgra, who filed a "novel" patent (patent No. 6,098,905) claiming the rights to an atta processing method, and was granted the patent on August 8, 2000. The method that ConAgra is claiming to be novel has been used throughout South Asia by thousands of atta chakkis, and so cannot justly be claimed as a novel patent. • Monsanto's Biopiracy of Indian Melons In May 2011, the U.S. company Monsanto was awarded a European patent on conventionally bred melons (EP 1 962 578). These melons, which originally stem from India, have a natural resistance to certain plant viruses. Using conventional breeding methods, this type of resistance was introduced to other melons and is now patented as a Monsanto "invention:' The actual plant disease, Cucurbit yellow stunting disorder virus (CYSDV), has been spreading through North America, Europe, and North Africa for several years. The Indian melon, which confers resistance to this virus, is registered in international seed banks as PI 313970. With the new patent, Monsanto can now block access to all breeding material inheriting the resistance derived from the Indian melon. The patent might discourage future breeding efforts and the development of new melon varieties. Melon breeders and farmers could be severely restricted by the patent. At the same time, it is already known that further breeding will be necessary to produce melons that are actually protected against the plant virus. DeRuiter, a well-known seed company in the Netherlands, originally developed the melons. DeRuiter used a nonsweet melon from India designated as PI 313970. Monsanto acquired DeRuiter in 2008 and now owns the· patent. The patent was opposed by several organizations in 2012. • Biopiracy of Brinjal The development of Bt brinjal by Monsanto and its Indian partner Mahyco is another classic example for biopiracy. The company has accessed nine Indian varieties of brinjal to develop their genetically modified vegetable without prior permission from the NBA or the relevant State and local boards. This is a violation of the Biological Diversity Act 2002, according to the Environmental Support Group (ESG), which lodged the formal complaint with the Karnataka Biodiversity Board on February 15, 2010, soon after the government put a moratorium on Bt brinjal on health and safety grounds (Priscila Jebaraj, Development of Bt brinjal a case of biopiracy: The Hindu, August 10, 2011). • Monsanto's Biopiracy of BT for Bt Cotton The Andhra Pradesh Biodiversity Board, a statutory body setup under the Biological Diversity Act 2002 by the Union government of India, is demanding royalty payments from Monsanto India Ltd. to the tune of 2% of the corporation's sales revenue. The Biodiversity Board argues that the Bt patent on Monsanto's Bt cotton is biopiracy-Monsanto India has "stolen'' genetic information from Bacillus thuringiensis (Bt) bacteria found in the soils of Mahanandi village -in the Kurnool district of Andhra Pradesh. This bacteria strain, the board claims, was then used to develop the genetically modified bollworm-resistant Bt cotton seeds that Monsanto sells in India. The six gene giants-Monsanto, Syngenta, Dupont, Dow, Bayer, and BASF-that take patents on seeds and biodiversity are also pushing genetically engineered seeds, such as Monsanto's Bt cotton. Genetically engineered crops are contaminating and polluting biodiversity, destroying the integrity of genetic resources; e.g., the corn in Mexico's center of genetic diversity has been found to be contaminated by Bt corn. New IPR laws are creating monopolies over seeds and plant genetic resources. Under pressure from World Bank, the Seed Policy of 1998 started to dismantle-India's robust public sector seed supply system. Monsanto has pushed its Bt cotton into Indian agriculture through corruption and fraud at every step. Bt cotton was commercialized in India during April 2002, with Monsanto being the major technology provider and operating through 60 regional biotech companies holding Bt licenses. Under international agreement, Monsanto/Mahyco can charge a royalty of 20% for three years and 5% for another three years. Even though Monsanto does not have a patent on Bt cotton in India, it collects royalties as fees for trait value. During 2004, the farmer had to pay Rs 1,600 for a single 450 gm packet of Bt cotton seeds, which included· a technology fee component of Rs 725. The intervention of state governments forced the company to slash the seed price. However, Monsanto still makes about Rs 34 billion per year from Indian farmers. A comparison of organic and Bt cotton seed prices during the last two decades will be relevant in this context. During the 1990s, the local seed cost was around Rs 9 per Kg. By 2004, the cost skyrocketed to Rs 1,650 and then to Rs 1,800 for less than half a kilogram (450 gm). At present, the seed cost is Rs '650 to Rs 920 for 450 gm. However, the current price still exhibits a disproportional increase when compared to the cost of seed (Rs 9) before the introduction of Bt. Other mandated inputs like fertilizers, pesticides, and utilities like water and electricity also saw a big rise in cost from the mid to late 1990s. The rising input costs have forced farmers into a debt trap. The states under the cotton belt have the highest number of farmer suicides due to agricultural indebtedness. From 1995 to 2015, more than 300,000 farmers have been driven to suicide. Most of them were located in the Bt cotton belt. • Monsanto's Biopiracy of Climate Resilience For millennia, farmers have innovated and evolved varieties with unique properties. Farmers' innovation focuses on breeding for climate resilience and for conservation of biodiversity. Giant corporations, which have destroyed biodiversity by promoting monocultures and uniformity, are now using biopiracy patents to claim farmers' collective, cumulative innovation as their "invention.” The latest in such biopiracy is the patenting of climate-resilient traits. At Navdanya, our community seed banks have been conserving climate-resilient crops since 1987, allowing us to distribute open-pollinated climate-resilient seeds in the aftermath of extreme climate events. The corporations are pirating the collective innovation of farmers in breeding crops that are resilient to droughts, floods, and salinity. The biotechnology industry is spreading the misconception that without genetic engineering, **we will not be able to evolve crops with** climate **resilience**. Farmers' varieties have high grain yields and high straw yields, which help to further increase soil fertility as well as its capacity for retaining moisture, either as green manure or as fodder for cattle, which in turn produce manure for the soil. In addition, farmers' varieties have been selected for their long-term ability to withstand several stresses and yet produce consistent yields. Thus farmers' varieties are ecologically sound varieties as well as food security-sound varieties. The resilience and wide adaptability of farmers' varieties is clear from the fact that while commercial and public sector varieties of salinity-resistant rice failed to rehabilitate agriculture in Ersama, Orissa in the aftermath of the super cyclone and floods of 1999, a farmers' variety from the Navdanya Project in West Bengal proved extremely successful, and is in high demand today. Farmers have developed and have been using these varieties for over hundreds of years; genetic engineers like Monsanto are just waking up to their potential. Corporations have taken out 1,500 patents on climate-resilient crops. The climate-resilient traits will become increasingly important in times of climate instability. Along coastal areas, farmers have evolved flood-tolerant and salt-tolerant varieties of rice such as Bhundi, Kalambank, Lunabakada, Sankarchin, Nalidhulia, Ravana, Seulapuni, and Dhosarakhuda. Crops such as millet have been selected for drought tolerance and provide food security in water-scarce regions and water-scarce years. Monsanto applied for blanket patents for "Methods of enhancing stress tolerance in plants and methods thereof.' (The title of the patent was later amended to “A method of producing a transgenic plant, with increasing heat tolerance, salt tolerance, or drought tolerance.”) These traits have been selected over millennia by our farmers, who have applied their knowledge of breeding. On July 5, 2013, Hon Justice Prabha Sridevi, Chair of the Intellectual Property Appellate Board of India, and Hon Shri DPS Parmar, technical member, dismissed Monsanto's appeal against the rejection of these patents that claim Monsanto has invented all resilience. **The patenting of seeds and life can only lead to biopiracy.** Just as the jurisprudence of Terra Nullius-which was used to colonize non-European peoples-defined the land as empty and allowed the takeover of territories by the European colonies, the jurisprudence of intellectual property rights related to life forms is in fact a jurisprudence of **Bio Nullius-life empty of intelligence**. The Earth is defined by her colonizers as dead matter, deemed unable to create, and farmers (lacking the lab coats we see in toothpaste commercials) are deemed to have empty heads that cannot innovate. The worldview of **Bio Nullius**-empty life-**does violence** and injustice **to the earth**, to farmers, and to all citizens. This violence of the Earth is **rooted in the denial of the creativity and rights of the Earth** as well as in the displacement of diversity. Every seed is an embodiment of millennia of nature's evolution and centuries of farmers' breeding. It is the distilled expression of the intelligence of the Earth and of farming communities. Farmers have bred seeds for diversity, resilience, taste, nutrition, health, and adaptation to local agro-ecosystems. Industrial breeding treats nature's contributions and farmers' contributions as nothing. My life has been dedicated to protecting the integrity of life, biodiversity, and indigenous knowledge. Seed saving is the foundation of Swaraj in our times. It is vital to our ability to address hunger and malnutrition and to bring back taste, nutrition, and quality in our food. Without conservation and evolution of the biodiversity of our seeds, we will not be able to adapt to climate change. Creating community seed banks is a significant step toward creatively resisting patents on life. Refusing to let our minds and lives be colonized by corporate constructions like patents on life is at the heart of freedom in our times.

#### Escobar SAYS bio-tech BUT only said they are bad because of SEEDS

Escobar 16

Laura. 2016. The Political Ontology Of Seeds: Seed Sovereignty Struggles In An Indigenous Resguardo In Colombia. Chapter 2 (p. 14-18) [https://doi.org/10.17615/4k8s-t747 //](https://doi.org/10.17615/4k8s-t747%20//) zh

4.2. Seed Political Economies The expansion of GM maize in Natagaima, Riosucio, Campoalegre, and other communities in Colombia, has brought a new round of enclosures, not only of land, but also of seeds. Rather than commons or public goods, seeds are increasingly conceived, produced, and managed as human-made –that is, scientifically redesigned– commodities available for private property. The enclosure of seeds, as one of the few means of production that remained largely under the control of farmers, is the result of the increased corporatization of global agri-food systems under neoliberalism. Following Friedmann and McMichael (1989) and McMichael (2009)– I refer to a ‘Corporate Seed Regime’, or a complex set of structures, norms and practices of seed governance and political economy, at play in Colombia. Its main institutions and practices include IPRs, **biotechnology**, the corporatization of plant science research, biosafety protocols, seed contracts and certification, seed banks, and bioprospecting. 12 **The commodification and enclosure of seed commons** –and life itself– is sustained by a form of **(bio)hegemony** or the “acceptance of a ‘natural’ order of capitalist relations of agrarian production” that takes for granted the commodification of life (Valdivia, 2010; Newell, 2009). Regarding agricultural biotechnology, such ‘natural order’ is based on a double reductionism – both genetic and economic– that furthers “the extension of the commodity realm to the molecular level” (McAfee, 2003: 209) In this way, seeds become a collection of genes that can be precisely and safely decoded, manipulated, moved across different species, and switched on and off to “devise super crops that will bring about the end of hunger” (McAffe, 2003: 205). In turn these “new commodity fictions” cannot only be privately owned, but also “quantified, priced and traded” in global stock markets (Sullivan, 2010: 114-116) One dimension of seed conflicts in Colombia is then related to the struggle to maintain seed sovereignty or the autonomous control of communities over seed reproduction and development. Among seed saving networks in Colombia, there is the defense of seeds as commons which is not necessarily antithetical, but rather, redefines markets (Colloredo and Antrosio, 2009). There are efforts to create alternative markets in order to exchange seeds through barter and reciprocity, but also to set fair prices for seeds. These initiatives are framed within initiatives towards what Gibson-Graham (2008) called a ‘community economy’ that includes, from my perspective, not only human, but multispecies practices of care and affects (Bellacasa, forthcoming; Bird Rose, 2012).

#### Same with the second one

**Escobar 16**

Laura. 2016. The Political Ontology Of Seeds: Seed Sovereignty Struggles In An Indigenous Resguardo In Colombia. Conclusion: pgs. 340-345) [https://doi.org/10.17615/4k8s-t747 //](https://doi.org/10.17615/4k8s-t747%20//) zh

5. Community Seed Economies: Rethinking Commons and Markets Chapter 6 explored why and how recovering creole seeds have become fundamental to the defense and reinvention of collective indigenous selves in Riosucio, particularly seed savers associated with the grassroots organization Asproinca, and the indigenous governments or cabildos. Creole **seeds embody** the historical agri-food worlds –memories, practices, knowledges– of Emberá-Chamí people in this region. To be sure, the defense and conservation of creole seeds is another kind of ‘engaged universal,’ or place-based conjugations of the agroecological paradigm with ‘traditional’ farming and food practices, and some aspects of Fedecafé’s model of coffee production. In this chapter, I analyzed three seed sovereignty initiatives to explain how creole seeds and anti-GM activism have become part of indigenous struggles for identity and autonomy. First, the seed savers’ networks that conserve, exchange, and breed creole seeds at different scales from on-farm to the national –and even international– through seed fairs. Second, the 2009 declaration of the Cañamomo and Lomaprieta resguardo as one of the few “Transgenic-Free Territories” in Colombia. This declaration forbade the cultivation and consumption of GM seeds and foods, particularly in public and private food security and agricultural development programs; expressed the commitment to defend traditional seeds, ancestral knowledges and territory; and mandated that local food sovereignty programs were based on the use of creole seeds from local seed savers or obtained through exchange with other seed saving networks. 341 Third, the Community Seed House in this same resguardo which temporarily stores and reproduce creole seeds and organically-grown commercial seeds to supply cabildos food sovereignty programs and conserve agrobiodiversity in the resguardos. I argued that these three initiatives evidenced not only a community seed economy (Gibson-Graham), but also the diversity of seed-human worlds that include seed barter, giftgiving, and fair prices; inter-epistemic dialogue between ‘traditional knowledges’, agroecology, and critical western science; or alternative seed certification systems that reflect the manifold values of seeds from ritualistic, to medicinal, to agronomical and dispute the primacy of industrial scientific breeding of ‘improved seeds,’ which seed savers refers to as semillas desmejoradas or “degraded seeds.” Finally, in this chapter I analyzed how these **seed sovereignty initiatives** in Riosucio **have prompted conflicts** with the government and corporations which enforce seed certification and intellectual property rights on seeds, as well as promote GM crops. These seed conflicts in Riosucio originated in the implementation of Ica’s Resolution 970 that requires the exclusive use of certified seed and prohibits on-farm seed saving, as mandated by the US-Colombia FTA, that erodes seed commons. Furthermore, **these seeds conflicts are at the base of broader issues, namely indigenous rights to self-government and the defense of their own agricultural practices**. Seed conflicts are then part of larger conflicts over autonomy and ‘modelos propios’ or placebased ways of inhabiting the territory that defy the developmentalist governmentality of the agrobiotechnology apparatus. In this sense, seed sovereignty is an integral part of food sovereignty and self-government. I end this section by clarifying that not all farmers in Riosucio are radically against GM, hybrid and other industrial improved seed. Many of these farmers have, in different degrees, 342 adopted the Green Revolution paradigm which is difficult to challenge and subvert; other are in a too vulnerable position to reject GM and other ‘improved’ kinds of seeds, be them in the form of food aid, agricultural and food security programs, or as a condition for obtaining credit. As I and Elizabeth Fitting (2016) wrote: “With the current coffee-crisis and the strengthening of indigenous politics, farmers in Riosucio are diversifying their production and increasing the cultivation of creole varieties, but this may not be as fast and steady as seed-savers networks and indigenous leaders hope for. Furthermore, seed sovereignty, the conservation of creole crops, agroecology, and anti-GM activism are increasingly important but not fully among the main issues currently on the political agenda of Colombian agrarian organizations as land reform, the peace process, and opposition to mega-mining and FTAs continue to be more salient issues. This may prove challenging for on-going and future alliances between seed savers networks and other agrarian movements in the country”. 6. Seed Relational Ontologies By looking at Seed Systems in Riosucio, in Chapter 6, I bring a bio-centric perspective to identity-making processes. A possibility opens for conceiving what Holland calls figured worlds that become embodied in –and through– non-human beings, such as seeds, who are both agents and socio-natural ‘artifacts’ that shape indigeneity in Riosucio. Seeds-human worlds in Riosucio are based on a sense of multispecies care and coevolution that supports practices of reciprocity, autonomy and diversity. Seeds may represent domination and exploitation for peasants and indigenous people when enclosed by powerful outside market actors, such as biotechnology corporations, and genetically modified. However, creole seeds may also constitute a figured world with humans; a living being who is material, symbolic and spiritually significant to definitions of personhood in the Colombian Andes. There are plenty of processes by which Asproinca farmers and seeds become together in their territory: the cyclical expenditure and renovation of energy or fuerza through cultivating and consuming seeds; the ritual bondages associated to agricultural cycles where seeds figure 343 prominently; the transmission of identities and knowledges in seed conservation; or the ways seed walk the territory alongside farmers as they are exchanged. One important caveat. The meaning of ‘creole’ seeds and its association with indigenous identities and struggles is historically and contextually dependent in Riosucio. The clearest example is coffee. Coffee has been both a vehicle of coloniality and resistance. Coffee is native to Africa, was then brought as a plantation crop to the Americas during European colonization and arrived in Riosucio in the hands of a later colonization by antioqueño settlers. However, shade-grown coffee varieties became traditional since the 1960s with Fedecafé’s implementation of the Green Revolution model that included sun-grown varieties. 7. The Epistemological and Ontological Dimensions of Seed Conflicts In a nutshell, in this dissertation I argued that seed conflicts in Colombia are ontological and epistemological conflicts to define what seeds are, and whose knowledge and labor counts in seed development at several, interconnected dimensions: First conflicts over whether seeds are, on the one hand, commodities **that can be privately owned and monopolized using the legal figure of ‘invention’** under the modern corporate ontology or, on the other, closely related beings that constitute a commons, under a more relational ontology. I showed how seed savers in Riosucio challenge this corporate seed ontology by arguing that creole varieties are not resources to be ‘discovered’, ‘invented’, and commodified by corporations and western-based science, and that UPOV91-based laws are unconstitutional. Second, a dispute over which knowledge systems and labour define what a good seed is. For the industry, it is seeds ‘improved’ using western techno-science for capital accumulation. Hence, corporations define GM seeds as good seeds because they are homogeneous, hold commodity value in global markets, are engineered for efficient pest control, and have high 344 productivity and input-dependency. Seed savers in Riosucio challenge the superiority of industry seeds by calling them ‘degraded seeds’ and refusing to use ICA’s certification systems. In contrast, they consider creole seeds ‘good’ seeds, because they are connected to their indigenous worlds and struggles, they are free and circulate in farmers’ hands, are heterogeneous and adapted to the different agricultural systems of small-scale farmers, and contribute to seed and food sovereignty and autonomy. 8. Future Seed Journeys On a final note, I believe my dissertation opens up discussion on how **seed conflicts contribute to theorizations on non-human agency**. In my opinion, seeds are endowed with agency, not because of consciousness or subjectivity, but due to their capacity to act on others somewhat independently of those others’ –including humans’– will, meanings, designs or control. In contrast, for most Asproinca and NFS seed savers, seeds are conscious, sacred beings; their vital force or elemental emerges from a supranatural, spiritual being or substance –be it Mother Nature, the Creator, God, etc.– that is present in all living creatures. From my perspective, such vitality and agency may be thought as intrinsic to living beings in the terms proposed by systems theory; as a “propensity of living systems and organisms for selforganization and self-generation” (Capra, 2002). The agency of genes, toxins, and other proto-agents, as Bennet (2010) calls them, is clearly seen in that they exceed the control of human-led genetic manipulation by causing unforeseen effects when violently inserted into foreign genomes and organisms. Bt toxins present in GM crops travels beyond the confines of GM organisms through water, soil, wind, and metabolic networks to end up in new organisms and life networks such as breastfeeding babies, bees, cattle or monarch butterflies and producing unknown effects. Transgenes producing 345 unknown –and unaccounted for– variant proteins that may be toxic or allergenic for host organisms, including humans. **Extending agency to non-human beings is important for two reasons**. **First** because **it calls into question the objectification of nature** –inanimate objects- **that leads to** instrumentalization, **exploitation and suffering of non-human beings, such as seeds**. **Second**, and interrelated, **because considering non-humans as actants contributes to dismantle human ‘uniqueness’** and superiority **that has grounded our fantasy of control and prevented us from feeling empathy** for -and recognizing our interconnectedness and co-dependence on- other earth-beings and systems. These issues are open for further research as they are beyond the scope of this dissertation.

### 2NC --- AT --- 2AC 6

#### 1. Immunity --- There’s a precedent of patents being immune to antitrust --- that’s key to innovation.

Schuster ’21 [W. Michael and Gregory Day; 2021; Professors at the University of Georgia’s Terry College of Business; Wisconsin Law Review, “Colluding Against a Patent,” Forthcoming Volume]

Courts have struggled to determine when, if ever, patent strategies may constitute an antitrust offense. In hopes of harmonizing patent and antitrust laws, the general rule is that a patent grants a zone of antitrust immunity, though questions persist about the scenarios in which a rightsholder has exceeded their patent's scope. 35Consider the competing functions of patent and antitrust laws.

1. Patent Law, Exclusion, and Innovation

The patent system is meant to promote innovation by granting twenty years of exclusive rights. 36Experts have long thought that society would lack incentives to create if third parties could copy and sell an inventor's device without incurring the costs of creation. 37To avoid this outcome, a patent confers exclusive rights, allowing the patent holder to charge monopoly prices (to the degree that consumers are willing to pay high [\*546] prices). 38If a party employs another's patented technology without acquiring a license, the patent owner may recover damages and seek injunctive relief, estopping the infringer from using the device altogether. 39Because patent law lacks a general defense of innocent or accidental infringement, firms must exercise significant caution in creating, employing, and selling technology. 40

Since a patent embodies "the right to exclude," it may come as little surprise that the system impedes degrees of competition. 41This has generated allegations that some patentees have sought to erect barriers to competition rather than to protect original technology. 42If patent owners undermine enough competition and innovation, critics contend that the abuse of patent rights should, at some point, constitute an antitrust offense. 43But antitrust's application to such innovation has so far posed a host of practical and theoretical problems.

2. Antitrust Law in the Shadow of Patents

Antitrust has struggled where it collides with patent law. To resolve this tension, courts have sought to draw clear lines about when patent owners can legally exclude competition or, in the alternative, when antitrust law may condemn exclusionary acts. The key to defining antitrust's scope stems from the historical difficulties of identifying anticompetitive conduct regardless of patent rights.

Uncertainty has long prevailed over the types of practices that antitrust law bans. This is due to the broad text of the Sherman Antitrust Act (Sherman Act) which facially forbids vast swaths of acceptable activity. 44Section 1 bans every trade restraint, as in "every contract, [\*547] combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce," 45while Section 2 makes it illegal to "monopolize, or attempt to monopolize ... any part of the trade or commerce." 46The courts, in turn, have struggled to identify when the elimination of firms was due to anticompetitive practices or valid competition. 47

To resolve confusion, courts in the 1970s leaned on scholarship (notably, the "Chicago School" 48) to reinterpret and narrow antitrust law into its modern form: the "consumer welfare prescription." 49The movement's leaders asserted that antitrust's sole purpose is to foster competition for the benefit of consumers. 50Because consumers are primarily concerned about prices, quality, and innovation, modern antitrust may only condemn exclusionary practices that raised prices, diminished quality, eroded innovation, or rendered similar effects in a defined market. 51To violate antitrust law, the reduction of competition [\*548] must derive from an exclusionary act rather than the innovation of superior goods or other legitimate means. 52

Since the patent system grants the legal right to exclude competition, 53the consensus is that patent owners enjoy antitrust immunity so long as they act within their patent's scope. 54Examples of where a rightsholder exceeds its patent and thereby offends antitrust law include the tying of a non-patented item with a patented good (which extends one's patent to the non-patented item) 55and sham infringement litigation. 56However, when a rightsholder refuses to license a patent or charges fortunes to do so, courts have largely characterized these acts as squarely within one's exclusive rights. 57The principle is that a patent owner - or anyone else - owes no duty to help their rival. 58

Also informing this rule, antitrust enforcement might threaten innovation. A theory is that firms would tepidly invest in research and development (R&D) if they feared exercising their right to exclude. 59Along the same lines, it is thought that courts are ill-equipped to identify whether an act of innovation was meant to produce a superior good or, instead, suppress competition. 60Thus, for practical and policy reasons, the exploitation of patent rights has not typically been considered an exclusionary act. Undeterred, plaintiffs have sought to impose antitrust liability on patent holders under an array of theories, as explained next.

#### 2. Suits --- Antitrust suits are uniquely time consuming and expensive --- That drains R&D efforts

Osenga '21 [Kristen; 6/7/21; Professor of Law at the University of Richmond School of Law; J.D. from the University of Illinois College of Law, Visiting Professor at Emory University School of Law and at William & Mary School of Law; "Opinion: We Must Win the Race to 5G," https://prescottenews.com/index.php/2021/06/07/opinion-we-must-win-the-race-to-5g/]

America must swiftly act to ensure we win the race to 5G. One of the biggest barriers to American development of 5G is antitrust law and enforcement, both domestically and internationally. A combination of domestic rulings and efforts by foreign governments have left many of our most innovative companies dangerously exposed. We need to respond to these anti-competitive measures to ensure American companies are competing on a level playing field.

Aggressive antitrust enforcement by both foreign and domestic forces threatens innovation by forcing American companies to engage in expensive litigation. The lawsuits often result in these companies being unable to exercise their legally granted intellectual property rights. Qualcomm – one of the most active companies in the 5G space – is embroiled in a years-long legal battle that jeopardizes its business model and could force it to sell its groundbreaking wireless chips at a steep discount. The problems American technology companies face overseas are even more extensive, as foreign governments like China prioritize technological supremacy over the rule of law.

China’s government and courts regularly disregard due process guidelines. American companies often face pressure to settle out of court because they know the process is rigged. In some instances, American companies weren’t allowed to view all the evidence against them or retain appropriate legal counsel. Without legal baselines, American companies are powerless to resist theft and wrongdoing by the CCP.

Another example of these manipulative legal maneuvers against U.S. companies by China occurred when the American company InterDigitial filed a suit in India alleging that Xiaomi, a Chinese tech giant, was infringing its patents. The Chinese Wuhan Intermediate Court stepped in and demanded InterDigital drop its case and not sue Xiaomi in any jurisdiction or face a hefty fine. Clearly, the CCP was putting its hand on the scales of justice to protect a domestic company.

Research by the Office of the United States Representative has found the laws that China chooses to enforce are often overly broad and essentially allow Chinese companies to seize intellectual property if American companies won’t hand it over at a steep discount.

These actions, in the U.S. and especially in China, can have devastating impacts on America’s role in 5G development. Historically, American companies have been the forerunners of innovation, and America has reaped the benefits. This process may not occur with 5G because only a handful of American companies, like Qualcomm, are heavily investing in 5G. These companies may be forced out of the market by expensive litigation costs or the outright theft of their products.

#### 3. Competence --- Antitrust courts are inept --- That chills innovation

Sipe ’17 [Matthew; December of 2016, published in the 2017 edition; J.D. at Yale Law School; American University Law Review, “Patents v. Antitrust: Preempting Conflict,” Vol. 66]

IV. RISK OF CONFLICT

The previous two Parts examined the existing sources of regulatory authority in the patent context--the PTO, the ITC, and the Federal Circuit--to create a hierarchy of potentially anticompetitive patent activities, categorizing them based on the degree to which they are already under patent-specific supervision. Where that alternative supervision exists, as the Credit Suisse Court recognized, the benefits of overlapping antitrust intervention are marginal. Of equal--if not greater--concern, however, are the costs of overlapping antitrust intervention.

The bulk of the Court's analysis in Credit Suisse was dedicated to calculating those costs in the securities context. Due to the "fine, complex, detailed line" separating activity the SEC permits and activity the SEC forbids, the "contradictory inferences" that might arise from identical behavior, the "need for securities-related expertise" in adjudication, the "risk of inconsistent court results," and the danger of permitting plaintiffs to "dress what is essentially a securities complaint in antitrust clothing," the Credit Suisse Court determined that "antitrust courts are likely to make unusually serious mistakes" where they intervene with securities law. 193 As a result, the Court stated, permitting antitrust law and securities law to overlap would likely "produce conflicting guidance, requirements, duties, privileges, or standards of conduct." 194 This Part extends that analysis to the patent context where the costs are equally substantial. Each of the above concerns is just as pressing in the patent sphere--if not moreso.

[\*451] A. The Fine Lines of Patent Law

In Credit Suisse, the Court characterized the line separating permissible and impermissible securities activity as "fine, complex, [and] detailed." 195 Accordingly, allowing antitrust and securities law to apply simultaneously would be particularly likely to produce conflicting guidance and requirements. The Court illustrated this dilemma:

It will often be difficult for someone who is not familiar with accepted syndicate practices to determine with confidence whether an underwriter has insisted that an investor buy more shares in the immediate aftermarket (forbidden), or has simply allocated more shares to an investor willing to purchase additional shares of that issue in the long run (permitted). And who but a securities expert could say whether the present SEC rules set forth a virtually permanent line, unlikely to change in ways that would permit the sorts of . . . conduct that it now seems to forbid? 196

Patent law is similarly replete with fine doctrinal lines separating the permissible and the forbidden. To provide just a few key examples, the frameworks governing patent misuse, exhaustion, inequitable conduct, and contributory infringement are highly complex and continue to develop and evolve.

As explained in Part III, patent misuse and exhaustion are equitable defenses to infringement. 197 The former applies where a patentee "impermissibly broadened the 'physical or temporal scope' of the patent grant with anticompetitive effect." 198 The patent then becomes "unenforceable until the misuse is purged." 199 The latter applies where a patented item has been "lawfully made and sold," after which "there is no restriction on [its] use to be implied for the benefit of the patentee." 200 An infringement claim based on downstream use or sale will therefore be dismissed as a matter of law. 201 The Federal Circuit, reviewing these defenses, 202 is forced to thus grapple with complex, "murk[y]" questions. 203 In terms of patent misuse: What is outside [\*452] the scope of any given patent grant? Has this particular patent been "leveraged" as part of the alleged anticompetitive scheme? How should courts analyze and resolve portfolio--rather than individual patent--misuse? 204 In terms of exhaustion: Does the article sold sufficiently embody the "essential features" of the patent? 205 To what extent can parties contract around exhaustion? 206 As a result, there is already "foreseeable polymorphism" in the doctrines of patent misuse and exhaustion, and "unforeseeable strains of potential misbehaviors" are likely to emerge. 207 Allowing generalist antitrust courts to intervene would only produce greater uncertainty and, ultimately, conflicting and inconsistent results.

Inequitable conduct is another equitable defense to patent infringement. 208 To successfully assert a claim of inequitable conduct, the accused infringer must show that the patentee failed to disclose information, such as prior art, in its patent application. 209 The patentee must also have "specific intent to deceive the PTO," such that the "PTO would not have granted the patent but for [the] failure to disclose." 210 The remedy, as expressed by the Federal Circuit, is the "'atomic bomb' of patent law": "inequitable conduct regarding any single claim renders the entire patent unenforceable." 211 The result is a fine line to adjudicate. Because the Federal Circuit has determined that "intent and materiality are separate elements . . . that . . . should not be put on a sliding scale with one another," the crucial--and highly technical--question of whether or not the patentee's alleged deception was the "but for" cause of the PTO's grant must be addressed fully in every case. 212 Again, inconsistency and uncertainty would mar this already complex doctrine if antitrust courts were left to adjudicate these claims.

[\*453] As opposed to direct infringement, contributory infringement covers situations where a party does not sell the patented article or practice the patented process, but instead

offers to sell or sells . . . a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use . . . . 213

For a plaintiff's claim of contributory infringement to succeed, the plaintiff must demonstrate that the defendant "knew that the combination for which its components were especially made was both patented and infringing," and that the "components have 'no substantial noninfringing uses.'" 214 In practice, contributory infringement claims can be incredibly complex, not only in technical terms--understanding how components may be used together or separately in infringing or noninfringing ways--but doctrinally as well. For example, there is a delicate line between raising a successful contributory infringement claim and impermissibly trying to extend the scope of one's patent over unpatented devices--potentially triggering misuse. 215 With the risk of a finding of unenforceability on one side and the possibility of rampant third-party infringement on the other, the costs of antitrust courts generating conflicting guidance or contributing to uncertainty in this doctrine would be quite high.

Altogether, the degree of complexity associated with patent doctrines, such as misuse, exhaustion, inequitable conduct, and contributory infringement, weigh in favor of preemption under Credit Suisse's analysis. If permitted instead to overlap, there is a significant risk that patent law and antitrust law would produce conflicting guidance and requirements. Just as generalist antitrust courts would struggle to distinguish permissible and forbidden securities arrangements--and fail to accurately forecast potential changes in securities law 216--they would struggle with the equally delicate and fine lines of patent doctrine.