# 1NC Meadows R5

## 1NC OFF

### 1NC – Theory

#### Interp – The aff must specify the influence and decision-making powers of tribal authorities over implementation of the plan in tribal lands in a delineated text in the 1AC.

#### Violation – they dotn

#### Ambiguity is a tool for settlers to define the terms of engagement with tribes. The liberal intentions of the 1AC don’t matter—absent defined standards, the policies will reproduce colonial domination.

Steinman ’12 Steinman, Erich. “Settler Colonial Power and the American Indian Sovereignty Movement: Forms of Domination, Strategies of Transformation.” American Journal of Sociology Vol. 117, No. 4, January 2012, <https://www.jstor.org/stable/10.1086/662708>. PeteZ

A traditional definition of "sovereignty" is: "The supreme, absolute, and uncontrollable power by which any independent state is governed."' 3 Questions regarding the sovereign rights of tribes are often the starting point of any federal Indian law issue. Although the whole of federal Indian law is quite complex,14 the essence of tribal sovereignty is simply the extent to which a tribe can attend to its own affairs and control its own cultural, societal, and economic development free from outside restraints. Under the current legal and political regimes, the extent of tribal control is ambiguous. The Handbook of Federal Indian Law lists three "fundamental principles" that demonstrate the anomalous and restricted nature of tribal sovereignty: (1) Indian tribes possess all the powers of a sovereign state; (2) conquest renders the tribes subject, however, to the legislative authority of the United States and terminates the tribes' external sovereign powers, but does not affect the internal sovereign powers of the tribes; and (3) these powers are subject to qualification by treaties and congressional legislation.' 5 Cohen's three principles demonstrate the dichotomy between internal and external sovereignty16 that pervades the concept of tribal sovereignty. Tribes are supposedly full sovereigns with respect to their own internal affairs and interests. At the same time, however, the United States government has completely extinguished their external sovereign powers.17 This state of affairs might not be problematic if defined standards for maintaining the relationship between the tribal and federal governments existed and the relationship were based upon the consent of the tribes. The history of tribal-federal relations demonstrates, however, that neither standards nor consent exist, and that the relationship is uncertain at best. Tribal-federal relations have periodically oscillated between two diametrically opposed views on the status of Indian Tribes. At one end of the spectrum is the belief that tribes are independent political communities and should control their own development.'8 At the other end lies the belief that the tribal system should be dismantled and individual Indians should be assimilated into the greater American society.19 While these views appear to be in extreme conflict, their implementation produces very similar results. The United States government dominates the tribal-federal relationship, allowing it to manipulate the situation to protect federal interests. The following historical background will demonstrate how the lack of definition and consent in the relationship promotes federal dominance.

#### Vote neg—

#### 1 – Critical Education – The policymaking process is not innocent. Force them to study how their practice of fiat can *itself* reproduce settler colonialism. For tribes, these details are life and death.

#### 2 – Ground – Tribal sovereignty is the first question in any debate about policies that affect natives – avoiding it is unfair, irresponsible, and bad for education.

#### 3 – Presumption – If their framing is right, then the state will always manipulate its policies to screw over tribes – you should presume no sovereignty.

#### 4 – CX doesn’t check: (A) My interp forces them to research these issues before round. (B) I can’t prep a strat against their aff until CX. (C) Footnoting DA—reduces crucial issues of sovereignty to a mere afterthought. (D) Specifying sovereignty should be the default—I shouldn’t have to ask.

#### Fairness is a voter and comes first –

#### A] debate’s a game that requires effective competition and negation, which makes their offense inevitable, it internal link turns clash and engagement.

#### B] Can’t weigh the aff—it’s just as likely that they’re winning it because we weren’t able to effectively prepare to defeat it.

#### C] Inescapable – the AC conforms to every norm of debate – speed, speech times, ballots – proves they value playing the game and isolating fairness as the one bad rule is arbitrary.

#### D] Probability – ballots can’t shape our subjectivity or create broad political change but can rectify in-round skews.

#### Education – it’s the only portable impact to debate

#### CI – a) brightlines are arbitrary and self-serving which doesn’t set good norms b) it collapses since weighing between brightlines rely on offense defense

#### DOD – a) it’s the only way to may up for time spent on theory b) it’s the only way to deter future abuse

#### No RVI’s- a) logic – you shouldn’t win for being fair b) clash – people go all in on theory which decks substance engagement c) chilling effect – people will be too scared to read theory because RVI’s encourage baiting theory

#### 1NC theory first - 1] Abuse was self-inflicted- They started the chain of abuse and forced me down this strategy 2] Norming- We have more speeches to norm over whether it’s a good idea since the shell was read earlier. Norming outweighs A] Constutivism- It’s the constitutive purpose of theory debating B] Sequencing- it’s a pre-requisite to actualizing any other voter like fairness or education

### 1NC – PIC

#### Counterplan Text: The member nations of the World Trade Organization ought to

#### reduce all Patents except for Patents owned by Indigenous people over Traditional Medical Knowledge

#### increase Patents used to protect Traditional Medical Knowledge based on a case-by-case consultation with Indigenous Patent Holders to ensure compatibility with communities’ values, norms, and objectives

#### model future actions governing Traditional Knowledge over their decision regarding Intellectual Property Protection of Traditional Medical Knowledge

#### The Counterplan effectively preserves Indigenous Medical Knowledge which solves Biopiracy that destroys Biodiversity – Patents are key.

* TK stands for Traditional Knowledge

Erstling 8, Jay. "Using patent to protect traditional knowledge." Tex. Wesleyan L. Rev. 15 (2008): 295. https://open.mitchellhamline.edu/cgi/viewcontent.cgi?article=1187&context=facsch (Professor of Law, William Mitchell College of Law, St. Paul, Minnesota.)//Elmer

WHY PATENT PROTECTION? Putting the differences in the above paragraph aside, a recent WIPO IGC consultation paper reported that "a significant number of patent applications concern inventions which are in some way related to traditional knowledge."12 A community's new and innovative advancements in TK may meet the requirements to qualify as patentable inventions, for example. In such cases, the holders of the TK need to ask whether they wish to take advantage of patent protection, whether it is in their best interests to do so, and assuming positive answers to both questions, whether they have the resources to file, prosecute, and enforce patent applications. More typically, inventions claimed by others may make use of a community's TK in that the others will derive their inventions from the TK or base their inventions on it.13 When inventions derived from TK become the subject of patent applications, the relationship between the inventions and their underlying TK may be key to the inventions' patentability. For example, the TK may constitute prior art that destroys an invention's novelty or non-obviousness. As prior art, failure to disclose the TK may result in a violation of the duty in United States patent law to disclose all known information material to patentability. 4 The TK may also directly relate to the question of inventorship and entitlement to apply for a patent since the holders of the TK-and not the named inventor-may constitute the true inventors or co-inventors of the claimed invention. It is clear, then, that **there are critical links between TK and the patent system**. The question is whether and if so, how, those links can be exploited **to foster protection for TK**. This question is not a new one and has been the subject of considerable scholarship. 15 The answer, which may prove more difficult to achieve than to posit, seems to lie in the objectives of the patent system itself. While the primary objective of patent law is affirmative, i.e., to enable the grant of exclusive patent rights for qualifying inventions, a **patent system** also **has** an **important defensive objective**, **to ensure** the denial of rights to inventions that are already known or lack a sufficient level of inventiveness. In addition, a patent system has a vital informational objective, to guarantee the disclosure to third parties of all relevant information concerning the invention as a quid pro quo for the grant of exclusive rights. Countries wishing to use patents to protect TK would do well to consider measures that reflect all three objectives. Such a threepronged approach would focus on putting into place legislative or other mechanisms to provide for (1) defensive protection of TK, (2) disclosure of TK, with consequent provision for benefit sharing, and/ or (3) affirmative protection of qualified TK through the grant of patent rights. Defensive protection would ensure that **none other than the holders of TK would be able to acquire i**ntellectual **p**roperty **rights** **over that knowledge**. a6 **Effective measures would include,** on the one hand, the adoption of legislation that recognizes TK as prior art and the creation of information systems to make TK searchable by patent offices,17 and, on the other, the **establishment of strong trade secret measures that allow the holders of TK to maintain the confidentiality of their knowledge should they choose to do so**.' 8 At the heart of the second prong-disclosure and benefit sharing-is **a community's right to maintain control over its TK**. Inherent in that control are measures that would require applicants for patents for inventions derived from or based on TK to disclose in the patent application the geographic source of that knowledge and to provide assurance that there has been prior informed consent to make use of the knowledge. The third prong of affirmative protection would make available information, mechanisms, and resources to holders of patentable TK to make sure that those who wished to take advantage of patent protection were able to assert their rights. WHY PROTECT TRADITIONAL KNOWLEDGE? Why should communities that hold TK choose to protect it? There is of course a moral rationale for protection, i.e., that communities should have the right to make use of their own TK pursuant to their own customs and policies, free from misappropriation or misuse by others. In addition, holders of TK may be motivated by economic, social, and environmental interests. Professor Graham Dutfield, a noted scholar on TK and intellectual property protection, has examined several of those interests. 19 With respect to economic mo tivators, Professor Dutfield has found that "[s]ome **indigenous** and local **communities** **depend on traditional knowledge** **for** their **livelihoods** and well-being, as well as **to sustainably manage and exploit their local ecosystems**. ' 2° For example, the World Health Organization (WHO) estimates that up to 80% of the world's population relies on traditional medicine for primary health care, and organizations such as the Food and Agriculture Organization (FAO), the World Bank, and the United Nations Environmental Programme (UNEP) now encourage the use of TK in sustainable rural development programs. Protecting TK could therefore "help local people to maintain livelihood security and physical well-being while providing opportunities for economic development."'" Protecting TK may also **benefit national economies by giving countries greater control over the commercial use of their knowledge.** TKbased products, including plant-based medicines, health products, cosmetics, and non-wood forest products, represent many developing countries' value added and are a potentially lucrative source of export revenue, which sound use of TK protection could help realize. Because TK is often an essential element in the development of other products, such as pharmaceuticals, dietary supplements, personal care, pesticides, and even industrial enzymes, **protecting TK could also give developing countries an economic edge in doing business with the industries that make those products and thereby promote domestic growth**.22 Protecting TK can also provide significant environmental benefits.23 Contrary to the common stereotype that subsistence agriculture is environmentally unfriendly, **traditional methods of** farming and **natural resource management** often **incorporate** a **conservation ethic that can enhance biodiversity**. **TK protection would** not only **contribute to** the **preservation of** the world's plant and animal **diversity**, it could also **foster** the fair and efficient dissemination of **environmentally sound agricultural methods** while benefiting the traditional communities that created them. Finally, while the patent system has been accused of facilitating biopiracy by tolerating third-party patenting of TK, **using the patent system** appropriately to protect TK **can** serve more to **prevent biopiracy** than to permit it. Biopiracy generally refers to the exploitation of traditional knowledge or genetic resources-typically by multinational companies-without the authorization of the holders of that knowledge, and/or the patenting of inventions based on traditional knowledge without the consent of the knowledge holders or payment of compensation.24 Several cases of alleged biopiracy, including patents granted for neem, turmeric, the enola bean, and quinoa, have aroused controversy and focused attention on how patenting can lead to unjust results.25 Although it is extremely difficult to estimate the extent to which biopiracy actually takes place in any particular country, protecting TK could **provide** some **assurance against misappropriation by clarifying the duty that third parties owe to the holders of the knowledge** when the knowledge has contributed to an invention that is the subject of a patent application. Thus there are convincing reasons for turning to the patent system to protect TK. The view is far from unanimous, however, that doing so makes sound policy. Many traditional communities are reluctant to embrace the patent system. The high cost of prosecuting and enforcing patents may be one cause for caution on the part of TK holders. Another may be the structure of the patent system itself. At a recent seminar on intellectual property, biotechnology, traditional knowledge, and social issues co-hosted by L'Institution Sciences Po and McGill University, Professor Tania Bubela expressed the commonly held view that: There is a mismatch between the IP rights framework and TK. The main problem is that IP rights are time limited. Patenting of TK also requires public disclosure but most TK is based on cultural and spiritual beliefs that do not always agree with disclosure. It is also very difficult to know who holds the traditional knowledge. An ap- propriate balance needs to be struck between national economic interests and the needs of the communities to which TK owes its existence.... 26 Based on the same reasoning, the majority of "Indigenous Groups in Attendance" at a 2000 UNCTAD Expert Meeting on Systems and National Experiences for the Protection of TK, Innovations and Prac tices recommended that "[t]he current IPR system is inappropriate for the recognition and protection of traditional knowledge systems because of the inherent conflicts between these two systems.... 2 **If patents are to be used** effectively to protect TK, therefore, **the concerns of** the **holders of TK will have to be addressed and measures adopted that are compatible with their communities' values, norms, and objectives**. To the extent that some of the concerns may be based on lack of confidence in, or misconceptions about, the patent system, clarification and education will be essential to provide TK holders with both the self-assurance and the wherewithal to make appropriate use of patents.

#### Using Patents to enforce Traditional Knowledge Protection has precedent.

Erstling 8, Jay. "Using patent to protect traditional knowledge." Tex. Wesleyan L. Rev. 15 (2008): 295. https://open.mitchellhamline.edu/cgi/viewcontent.cgi?article=1187&context=facsch (Professor of Law, William Mitchell College of Law, St. Paul, Minnesota.)//Elmer

Advantages of Affirmative Protection Despite the above-mentioned limitations and challenges, **patents have a place in a TK protection system**. A **prime example is** the use of patents to protect **Traditional Chinese Medicine**. The practice of Traditional Chinese Medicine dates back to the beginning of Chinese history. At its most basic, it is "a systematic practice of distinguishing among various illness-causing imbalances of qi. [It] achieves health by restoring a patient's internal yin-yang equilibrium via herbal remedies and physical manipulation."1'69 Traditional Chinese Medicine is of **enormous importance** not only **to** the **Chinese**-**and** the **world's healthcare systems**, but also to the Chinese economy. 170 It is no surprise, therefore, that the Chinese Government has made it a policy to encourage the patenting of innovative Traditional Chinese Medicinal products. Although most developing countries tend to find disfavor with the **TRIPS** Agreement, the Agreement has proven to be a **boon to** the **protection of T**raditional **C**hinese **M**edicine. Prior to the adoption of Article 27.1 of the TRIPS Agreement, which required China to make patents available "for any inventions, whether products or processes, in all fields of technology . . . " the Chinese Patent Law171 did not protect Traditional Chinese Medicine. Since the Law's amendment, there has been a significant **uptake in patent activity**, particularly related to Traditional Chinese Medicine-based pharmaceuticals, and many supporters of Traditional Chinese Medicine believe that this activity has served to incentivize investment in Traditional Chinese Medicine, increase the Traditional Chinese Medicine knowledge base, and transform Traditional Chinese Medicine into a major global export asset. 172 Since 1992, when the Patent Law was amended, applicants have filed patent applications with the State Intellectual Property Office of China (SIPO) at a rate of 1,400 cases a year, 173 but they have not limited their activity to China alone; they have also filed applications in countries such as Germany, Japan, the United Kingdom, and the United States. Moreover, patent holders have begun to enforce the rights they have been granted. For example, in February 2007, China Business News reported that a **Chinese patentee** Traditional Chinese Medicine manufacturer **won** the **first** **T**raditional **C**hinese **M**edicine **infringement case** against another Chinese company. The patentee was awarded an injunction prohibiting the infringing company from selling the infringing products as well as damages. 174 The promotion of Traditional Chinese Medicine has led to the establishment of organizations such as the Shanghai Innovative Research Center of Traditional Chinese Medicine (SIRC), 75 which in turn has further encouraged patent protection for TK. Founded in 2000 with support from the Chinese Ministry of Science and Technology and the Shanghai Municipal Government, SIRC seeks to modernize Traditional Chinese Medicine and innovate drug discovery "by integrating modern life science, chemistry, and information technology with [Traditional Chinese Medicine]"1 76 -just the right formula to maximize patenting potential. 177 Although the patent system may not be suited to all types of TK, using patents to protect Traditional Chinese Medicine seems to have achieved some success in encouraging new innovation and invention. Communities working to advance other areas of innovative TK may do well to follow China's example.

#### Biodiversity loss is existential and outweighs other threats.

Torres 16 Phil Torres 5-20-2016 “Biodiversity Loss: An Existential Risk Comparable to Climate Change” http://futureoflife.org/2016/05/20/biodiversity-loss/ (conservationist, science advocate & educator. 2 years based in Amazon rainforest, now exploring science around the world)//Elmer

**The repercussions of biodiversity loss are** potentially **as severe as** those anticipated from climate change, or even **a nuclear conflict**. For example, according to a 2015 [study](http://www.ncbi.nlm.nih.gov/pubmed/26601195) published in Science Advances, the best available evidence reveals “an exceptionally rapid loss of biodiversity over the last few centuries, indicating that **a sixth mass extinction** is already under way.” This conclusion holds, even on the most optimistic assumptions about the background rate of species losses and the current rate of vertebrate extinctions. The group classified as “vertebrates” includes mammals, birds, reptiles, fish, and all other creatures with a backbone. The article argues that, using its conservative figures, the average loss of vertebrate species was 100 times higher in the past century relative to the background rate of extinction. (Other scientists have suggested that the current extinction rate could be as much as 10,000 times higher than normal.) As the authors write, “The evidence is incontrovertible that recent extinction rates are unprecedented in human history and highly unusual in Earth’s history.” Perhaps the term “Big Six” should enter the popular lexicon—to add the current extinction to the previous “Big Five,” the last of which wiped out the dinosaurs 66 million years ago. But the concept of biodiversity encompasses more than just the total number of species on the planet. It also refers to the size of different populations of species. With respect to this phenomenon, multiple studies have confirmed that wild populations around the world are dwindling and disappearing at an alarming rate. For example, the 2010 [Global Biodiversity Outlook](https://www.cbd.int/gbo3) report found that the population of wild vertebrates living in the tropics dropped by 59 percent between 1970 and 2006. The report also found that the population of farmland birds in Europe has dropped by 50 percent since 1980; bird populations in the grasslands of North America declined by almost 40 percent between 1968 and 2003; and the population of birds in North American arid lands has fallen by almost 30 percent since the 1960s. Similarly, 42 percent of all amphibian species (a type of vertebrate that is sometimes called an “ecological indicator”) are undergoing population declines, and 23 percent of all plant species “are estimated to be threatened with extinction.” [Other studies](http://commondreams.org/views/2016/02/10/biodiversity-loss-and-doomsday-clock-invisible-disaster-almost-no-one-talking-about) have found that some 20 percent of all reptile species, 48 percent of the world’s primates, and 50 percent of freshwater turtles are threatened. Underwater, about 10 percent of all coral reefs are now dead, and another 60 percent are in danger of dying. Consistent with these data, the 2014 [Living Planet Report](http://bit.ly/1ssxx5m) shows that the global population of wild vertebrates dropped by 52 percent in only four decades—from 1970 to 2010. While biologists often avoid projecting historical trends into the future because of the complexity of ecological systems, it’s tempting to extrapolate this figure to, say, the year 2050, which is four decades from 2010. As it happens, a 2006[study](http://science.sciencemag.org/content/314/5800/787) published in Science does precisely this: It projects past trends of marine biodiversity loss into the 21st century, concluding that, unless significant changes are made to patterns of human activity, there will be virtually no more wild-caught seafood by 2048. 48% of the world’s primates are threatened with extinction. Catastrophic consequences for civilization. The consequences of this rapid pruning of the evolutionary tree of life extend beyond the obvious. There could be surprising effects of biodiversity loss that scientists are unable to fully anticipate in advance. For example, prior research has shown that localized **ecosystems** can **undergo abrupt** and **irreversible shifts when they reach a tipping point**. According to a 2012 [paper](http://www.nature.com/nature/journal/v486/n7401/full/nature11018.html) published in Nature, there are reasons for thinking that we may be approaching a tipping point of this sort in the global ecosystem, beyond which the consequences could be catastrophic for civilization. As the authors write, a planetary-scale transition could precipitate “substantial losses of ecosystem services required to sustain the human population.” An ecosystem service is any ecological process that benefits humanity, such as food production and crop pollination. **If the global ecosystem were to cross a tipping point** and substantial ecosystem services were lost, **the results could be “widespread social unrest, economic instability, and loss of** human **life**.” According to Missouri Botanical Garden ecologist Adam Smith, one of the paper’s co-authors, this could occur in a matter of decades—far more quickly than most of the expected consequences of climate change, yet equally destructive. **Biodiversity loss is a “threat multiplier” that**, by pushing societies to the brink of collapse, **will exacerbate** existing **conflicts** and introduce entirely new struggles **between state and non-state actors**. Indeed, **it could even fuel the rise of terrorism. (After all, climate change has been** [linked](http://thebulletin.org/climate-change-and-syrian-uprising) **to the emergence of ISIS in Syria, and multiple high-ranking US officials, such as former US Defense Secretary** [Chuck Hagel](http://www.defense.gov/News-Article-View/Article/603441)**and CIA director** [John Brennan](http://www.cnsnews.com/news/article/cnsnewscom-staff/cia-director-cites-impact-climate-change-deeper-cause-global)**, have affirmed that climate change and terrorism are connected.)** The reality is that we are entering the sixth mass extinction in the 3.8-billion-year history of life on Earth, and the impact of this event could be felt by civilization “in as little as three human lifetimes,” as the aforementioned 2012 Nature paper notes. Furthermore, the widespread decline of biological populations could plausibly initiate a dramatic transformation of the global ecosystem on an even faster timescale: perhaps a single human lifetime. The unavoidable conclusion is that biodiversity loss **constitutes an existential threat** in its own right. As such, it ought to be considered **alongside climate change and nuclear weapons** as one of the most significant contemporary risks to human prosperity and survival.

### 1NC – DA

#### Reconciliation passes now – the delay gives Biden time to work magic in the wings, but PC and focus are key

Herb et al. 10-1 (Jeremy Herb, CNN Politics Reporter, Kevin Liptak, Reporter, Phil Mattingly, Senior White House Correspondent, Lauren Fox, CNN Congressional Correspondent, Melanie Zanona, Capitol Hill Reporter, “'It doesn't matter when': How Biden gave feuding House Democrats an off-ramp”, CNN Politics, 10-1-21, <https://www.cnn.com/2021/10/01/politics/dems-biden-infrastructure-delay/index.html)//babcii>

(CNN)President Joe Biden didn't [travel to Capitol Hill on Friday](https://www.cnn.com/2021/10/01/politics/house-vote-infrastructure-democrats/index.html) to close the deal, or to rally the troops through a final legislative gantlet. There was nothing cinematic -- or dramatic -- about the trip down Pennsylvania Avenue for the 36-year Senate veteran, who has more than once informed aides of [his unparalleled ability](http://www.cnn.com/2021/09/27/politics/biden-agenda-congress-deal-maker/index.html) to read, speak to and corral lawmakers. Instead, in remarks that lasted less than 30 minutes, Biden served a singular purpose: a presidential pressure relief valve. In a week deemed an "inflection point" by top aides, where the President was rarely seen in public as his entire domestic agenda hung in the balance, it marked a seemingly low bar to clear for success. There would be no miraculous deal to unlock the formula to move forward on the two key components Democrats are attempting to pass. The promised vote on the [$1.2 trillion infrastructure bill](https://www.cnn.com/politics/live-news/congress-infrastructure-bill-vote-10-01-21/index.html) would not materialize. But after days of intraparty warfare and feverish late-night negotiations, a reset was desperately needed -- and the best Biden could offer. In delivering an unscripted and at times unwieldy message that the infrastructure vote wasn't likely to happen -- and the top-line cost of the economic and climate package was going to have to come down -- the President made the bet that he can keep both sides of the intraparty feud on board in the critical days and weeks to follow. **White House and Democratic leaders will now launch an all-out effort to win** over the two Senate Democratic holdouts, Sens. [Joe Manchin of West Virginia](https://www.cnn.com/2021/09/30/politics/joe-manchin-budget-bill-1-5-trillion-schumer/index.html) and [Kyrsten Sinema of Arizona](https://www.cnn.com/2021/09/30/politics/kyrsten-sinema-arizona-reaction/index.html), as they shape what the multitrillion-dollar economic and social package looks like -- and how high its price tag will be. Congressional Democrats and White House officials say progress was made this week getting all sides closer to an agreement on the massive economic, climate and health care spending package that Democratic leaders intend to pair with the bipartisan $1.2 trillion infrastructure bill that's passed the Senate already. But in the House, moderate and progressive Democrats were engaged in a **slow-motion game of chicken** over the infrastructure vote, with moderates demanding a vote on the infrastructure bill this week that had been pledged by House Speaker Nancy Pelosi -- and [progressives standing firm that they would vote it down](https://www.cnn.com/2021/09/30/politics/house-infrastructure-negotiations-vote/index.html) without an agreement on the framework for the larger economic package. On Friday, Biden sought the off-ramp. It marked his most direct effort to date to cajole the House Democratic caucus at a moment when its members have grown increasingly frustrated about the amount of attention the President and his team have paid to their side of the Capitol. Though well received with several ovations, the appearance didn't serve to salve those wounds entirely -- with some saying afterward that his pep talk had actually exacerbated them. But it did deliver a critical message and a consequential moment, multiple members said: Compromise now -- or end up with nothing. It's likely too soon to say whether the debate this week is just a preamble to Democrats' enacting their historic agenda or if it's a feud that leads to legislative defeat, hobbling the President's party ahead of a tough midterm election cycle with little to show for controlling both chambers of Congress and the White House. 'Who knows what label I get' After the roughly half hour meeting with the President, Democrats described a leader who was in his element and not working to change minds as much as remind members of their shared and unified goals as a caucus. Throughout the infrastructure push, Biden has made clear to Democrats that party unity -- or, in some participants' interpretation, loyalty -- is of utmost importance with only the slimmest of majorities in the House and Senate. He tried to break down the stalemate and the tensions that have hung over the party for weeks, reminding them that he's not on one side or the other. At one point, he made a reference to his own political ideology, saying, "Who knows what label I get." To which Pelosi replied: "President," prompting loud laughter from the room. Biden also talked about how he had redone his office to have paintings hung of Lincoln and FDR -- "A deeply divided country and the biggest economic transformation," said Rep. David Cicilline of Rhode Island, "which is kind of the moment we're in." White House officials think the President accomplished what he went to do on Capitol Hill: Remind Democrats of what is at stake while relieving some of the pressure that had built up over the last several days and reiterating his commitment to passing both pieces of legislation. With that done, officials believe, negotiators have a better environment to be able to push toward a deal. "We're going to get this done," Biden told reporters as he left the meeting. "It doesn't matter when. It doesn't, whether it's in six minutes, six days or six weeks -- we're going to get it done." 'As long as we're still alive' Even before Friday, Biden had alluded in recent days to negotiations slipping beyond the week's end. With the stakes simply too high -- on both the political and policy fronts -- there are no plans to walk away. "It may not be by the end of the week," the President had responded when asked Monday how he would define success at the end of this week. "I hope it's by the end of the week." "But as long as we're still alive ...," Biden said before shifting course in his thought.

#### Attacks on Pharmaceutical Profits triggers Mod Dem Backlash – it disrupts unity.

Cohen 9-6 Joshua Cohen 9-6-2021 "Democrats’ Plans To Introduce Prescription Drug Pricing Reform Face Formidable Obstacles" <https://www.forbes.com/sites/joshuacohen/2021/09/06/democrats-plans-to-introduce-prescription-drug-pricing-reform-face-obstacles/?sh=37a269917395> (independent healthcare analyst with over 22 years of experience analyzing healthcare and pharmaceuticals.)//Elmer

There’s considerable uncertainty regarding passage with a simple majority of the 2021 massive budget reconciliation bill. Last week, Senator Joe Manchin called on Democrats to pause pushing forward the budget reconciliation bill. If Manchin winds up saying no to the bill, this would scuttle it as the Democrats can’t afford to lose a single Senator. And, there’s speculation that provisions to reduce prescription drug prices may be watered down and not incorporate international price referencing. Additionally, reduced prices derived through Medicare negotiation may not be able to be applied to those with employer-based coverage. While the progressive wing of the Democratic Party supports drug pricing reform, **several key centrist Democrats** in both the House and Senate appear to be **uncomfortable** **with** particular aspects of the budget reconciliation bill, including a potential deal-breaker, namely the potential **negative impact of drug price controls on the domestic pharmaceutical industry**, as well as long-term patient access to new drugs. A paper released in 2019 by the nonpartisan Congressional Budget Office found that the proposed legislation, H.R. 3, would reduce global revenue for new drugs by 19%, leading to 8 fewer drugs approved in the U.S. between 2020 and 2029, and 30 fewer drugs over the next decade. And, a new report from the CBO reinforces the message that drug pricing legislation under consideration in Congress could lead to fewer new drugs being developed and launched. **Intense lobbying efforts from biopharmaceutical industry groups** **are underway**, **warning of** what they deem are **harms from price controls in** the form of diminished patient **access to new innovations**. The argument, based in part on assumptions and modeling included in the CBO reports, asserts that price controls would dampen investment critical to the biopharmaceutical industry’s pipeline of drugs and biologics. **This** won’t sway most Democrats, but has been a traditional talking point in the Republican Party for decades, and **may convince some centrist Democrats to withdraw backing** of provisions **that** in their eyes **stymie pharmaceutical innovation.** If the budget reconciliation bill would fail to garner a majority, a pared down version of H.R. 3, or perhaps a new bill altogether, with Senator Wyden spearheading the effort, could eventually land in the Senate. But, a similar set of provisos would apply, as majority support in both chambers would be far from a sure thing. In brief, Democrats’ plans at both the executive and legislative branch levels to introduce prescription **drug pricing reform** **encounter challenges** which may prevent impactful modifications from taking place.

#### Sinema specifically jumps Ship.

Hancock and Lucas 20 Jay Hancock and Elizabeth Lucas 5-29-2020 "A Senator From Arizona Emerges As A Pharma Favorite" <https://khn.org/news/a-senator-from-arizona-emerges-as-a-pharma-favorite/> (Senior Correspondent, joined KHN in 2012 from The Baltimore Sun, where he wrote a column on business and finance. Previously he covered the State Department and the economics beat for The Sun and health care for The Virginian-Pilot of Norfolk and the Daily Press of Newport News. He has a bachelor’s degree from Colgate University and a master’s in journalism from Northwestern University.)//Elmer

Sen. Kyrsten **Sinema formed** a **congressional caucus to raise** “**awareness of the benefits of personalized medicine**” in February. Soon after that, employees of **pharmaceutical companies** **donated** $35,000 to her campaign committee. Amgen gave $5,000. So did Genentech and Merck. Sanofi, Pfizer and Eli Lilly all gave $2,500. Each of those companies has invested heavily in personalized medicine, which promises individually tailored drugs that can cost a patient hundreds of thousands of dollars. **Sinema** is a first-term Democrat from Arizona but has nonetheless **emerged as a pharma favorite in Congress** as the industry steers through a new political and economic landscape formed by the coronavirus. She is a **leading recipient of pharma campaign cash** even though she’s not up for reelection until 2024 and lacks major committee or subcommittee leadership posts. For the 2019-20 election cycle through March, political action committees run by employees of drug companies and their trade groups gave her $98,500 in campaign funds, Kaiser Health News’ Pharma Cash to Congress database shows. That stands out in a Congress in which a third of the members got no pharma cash for the period and half of those who did got $10,000 or less. The contributions give companies a chance to cultivate Sinema as she restocks from a brutal 2018 election victory that cost nearly $25 million. Altogether, pharma PACs have so far given $9.2 million to congressional campaign chests in this cycle, compared with $9.4 million at this point in the 2017-18 period, a sustained surge as the industry has responded to complaints about soaring prices. Sinema’s pharma haul was twice that of Sen. Susan Collins of Maine, considered one of the most vulnerable Republicans in November, and approached that of fellow Democrat Steny Hoyer, the powerful House majority leader from Maryland. It all adds up to **a bet by drug companies that** the 43-year-old **Sinema**, first elected to the Senate in 2018, **will** gain influence in coming years and **serve as an industry ally** in a party that also includes many lawmakers harshly critical of high drug prices and the companies that set them.

#### Pharma backlash independently turns Case.

Huetteman 19 Emmarie Huetteman 2-26-2019 “Senators Who Led Pharma-Friendly Patent Reform Also Prime Targets For Pharma Cash” <https://khn.org/news/senators-who-led-pharma-friendly-patent-reform-also-prime-targets-for-pharma-cash/> (former NYT Congressional correspondent with an MA in public affairs reporting from Northwestern University’s Medill School)//Elmer

Early last year, as lawmakers vowed to curb rising drug prices, Sen. Thom Tillis was named chairman of the Senate Judiciary Committee’s subcommittee on intellectual property rights, a committee that had not met since 2007. As the new gatekeeper for laws and oversight of the nation’s patent system, the North Carolina Republican signaled he was determined to make it easier for American businesses to benefit from it — a welcome message to the drugmakers who already leverage patents to block competitors and keep prices high. Less than three weeks after introducing a bill that would make it harder for generic drugmakers to compete with patent-holding drugmakers, Tillis opened the subcommittee’s first meeting on Feb. 26, 2019, with his own vow. “From the United States Patent and Trademark Office to the State Department’s Office of Intellectual Property Enforcement, no department or bureau is too big or too small for this subcommittee to take interest,” he said. “And we will.” In the months that followed, tens of thousands of dollars flowed from pharmaceutical companies toward his campaign, as well as to the campaigns of other subcommittee members — including some who promised to stop drugmakers from playing money-making games with the patent system, like Sen. John Cornyn (R-Texas). Tillis received more than $156,000 from political action committees tied to drug manufacturers in 2019, more than any other member of Congress, a new analysis of KHN’s Pharma Cash to Congress database shows. Sen. Chris Coons (D-Del.), the top Democrat on the subcommittee who worked side by side with Tillis, received more than $124,000 in drugmaker contributions last year, making him the No. 3 recipient in Congress. No. 2 was Sen. Mitch McConnell (R-Ky.), who took in about $139,000. As the Senate majority leader, he controls what legislation gets voted on by the Senate. Neither Tillis nor Coons sits on the Senate committees that introduced legislation last year to lower drug prices through methods like capping price increases to the rate of inflation. Of the four senators who drafted those bills, none received more than $76,000 from drug manufacturers in 2019. Tillis and Coons spent much of last year working on significant legislation that would expand the range of items eligible to be patented — a change that some experts say would make it easier for companies developing medical tests and treatments to own things that aren’t traditionally inventions, like genetic code. They have not yet officially introduced a bill. As obscure as patents might seem in an era of public **outrage** **over** drug prices, the fact that **drugmakers** gave most **to** the **lawmakers working to change the patent system** belies how important securing **the exclusive right to market a drug, and keep competitors at bay, is to their bottom line**. “**Pharma will fight to the death to preserve patent rights**,” said Robin Feldman, a professor at the UC Hastings College of the Law in San Francisco who is an expert in intellectual property rights and drug pricing. “Strong patent rights are central to the games drug companies play to extend their monopolies and keep prices high.” Campaign contributions, closely tracked by the Federal Election Commission, are among the few windows into how much money flows from the political groups of drugmakers and other companies to the lawmakers and their campaigns. Private companies generally give money to members of Congress to encourage them to listen to the companies, typically through lobbyists, whose activities are difficult to track. They may also communicate through so-called dark money groups, which are not required to report who gives them money. Over the past 10 years, the **pharmaceutical industry** has **spent** about $**233 million per year on lobbying**, according to a new study published in JAMA Internal Medicine. That is more than any other industry, including the oil and gas industry. Why Patents Matter Developing and testing a new drug, and gaining approval from the Food and Drug Administration, can take years and cost hundreds of millions of dollars. Drugmakers are generally granted a six- or seven-year exclusivity period to recoup their investments. But drugmakers have found ways to extend that period of exclusivity, sometimes accumulating hundreds of patents on the same drug and blocking competition for decades. One method is to patent many inventions beyond a drug’s active ingredient, such as patenting the injection device that administers the drug. Keeping that arrangement intact, or expanding what can be patented, is where lawmakers come in. Lawmakers Dig In Tillis’ home state of North Carolina is also home to three major research universities and, not coincidentally, multiple drugmakers’ headquarters, factories and other facilities. From his swearing-in in 2015 to the end of 2018, Tillis received about $160,000 from drugmakers based there or beyond. He almost matched that four-year total in 2019 alone, in the midst of a difficult reelection campaign to be decided this fall. He has raised nearly $10 million for his campaign, with lobbyists among his biggest contributors, according to OpenSecrets. Daniel Keylin, a spokesperson for Tillis, said Tillis and Coons, the subcommittee’s top Democrat, are working to overhaul the country’s “antiquated intellectual property laws.” Keylin said the bipartisan effort protects the development and access to affordable, lifesaving medication for patients,” adding: “No contribution has any impact on how [Tillis] votes or legislates.” Tillis signaled his openness to the drug industry early on. The day before being named chairman, he reintroduced a bill that would limit the options generic drugmakers have to challenge allegedly invalid patents, effectively helping brand-name drugmakers protect their monopolies. Former Sen. Orrin Hatch (R-Utah), whose warm relationship with the drug industry was well-known, had introduced the legislation, the Hatch-Waxman Integrity Act, just days before his retirement in 2018. At his subcommittee’s first hearing, Tillis said the members would rely on testimony from private businesses to guide them. He promised to hold hearings on patent eligibility standards and “reforms to the Patent Trial and Appeal Board.” In practice, the Hatch-Waxman Integrity Act would require generics makers challenging another drugmaker’s patent to either take their claim to the Patent Trial and Appeal Board, which acts as a sort of cheaper, faster quality check to catch bad patents, or file a lawsuit. A study released last year found that, since Congress created the Patent Trial and Appeal Board in 2011, it has narrowed or overturned about 51% of the drugmaker patents that generics makers have challenged. Feldman said the drug industry “went berserk” over the number of patents the board changed and has been eager to limit use of the board as much as possible. Patent reviewers are often stretched thin and sometimes make mistakes, said Aaron Kesselheim, a Harvard Medical School professor who is an expert in intellectual property rights and drug development. Limiting the ways to challenge patents, as Tillis’ bill would, does not strengthen the patent system, he said. “You want overlapping oversight for a system that is as important and fundamental as this system is,” he said. As promised, Tillis and Coons also spent much of the year working on so-called Section 101 reform regarding what is eligible to be patented — “a very major change” that “would overturn more than a century of Supreme Court law,” Feldman said. Sean Coit, Coons’ spokesperson, said lowering drug prices is one of the senator’s top priorities and pointed to Coon’s support for legislation the pharmaceutical industry opposes. “One of the reasons Senator Coons is leading efforts in Congress to fix our broken patent system is so that life-saving medicines can actually be developed and produced at affordable prices for every American,” Coit wrote in an email, adding that “his work on Section 101 reform has brought together advocates from across the spectrum, including academics and health experts.” In August, when much of Capitol Hill had emptied for summer recess, Tillis and Coons held closed-door meetings to preview their legislation to stakeholders, including the Pharmaceutical Research and Manufacturers of America, or PhRMA, the brand-name drug industry’s lobbying group. “We regularly engage with members of Congress in both parties to advance practical policy solutions that will lower medicine costs for patients,” said Holly Campbell, a PhRMA spokesperson. Neither proposal has received a public hearing. In the 30 days before Tillis and Coons were named leaders of the revived subcommittee, drug manufacturers gave them $21,000 from their political action committees. In the 30 days following that first hearing, Tillis and Coons received $60,000. Among their donors were PhRMA; the Biotechnology Innovation Organization, the biotech lobbying group; and five of the seven drugmakers whose executives — as Tillis laid out a pharma-friendly agenda for his new subcommittee — were getting chewed out by senators in a different hearing room over patent abuse. Cornyn Goes After Patent Abuse Richard Gonzalez, chief executive of AbbVie Inc., the company known for its top-selling drug, Humira, had spent the morning sitting stone-faced before the Senate Finance Committee as, one after another, senators excoriated him and six other executives of brand-name drug manufacturers over how they price their products. Cornyn brought up AbbVie’s more than 130 patents on Humira. Hadn’t the company blocked its competition? Cornyn asked Gonzalez, who carefully explained how AbbVie’s lawsuit against a generics competitor and subsequent licensing deal was not what he would describe as anti-competitive behavior. “I realize it may not be popular,” Gonzalez said. “But I think it is a reasonable balance.” A minute later, Cornyn turned to Sen. Chuck Grassley (R-Iowa), who, like Cornyn, was also a member of the revived intellectual property subcommittee. This is worth looking into with “our Judiciary Committee authorities as well,” Cornyn said, effectively threatening legislation on patent abuse. The next day, Mylan, one of the largest producers of generic drugs, gave Cornyn $5,000, FEC records show. The company had not donated to Cornyn in years. By midsummer, every drug company that sent an executive to that hearing had given money to Cornyn, including AbbVie. Cornyn, who faces perhaps the most difficult reelection fight of his career this fall, ranks No. 6 among members of Congress in drugmaker PAC contributions last year, KHN’s analysis shows. He received about $104,000. Cornyn has received about $708,500 from drugmakers since 2007, KHN’s database shows. According to OpenSecrets, he has raised more than $17 million for this year’s reelection campaign. Cornyn’s office declined to comment. On May 9, Cornyn and Sen. Richard Blumenthal (D-Conn.) introduced the **Affordable Prescriptions for Patients Act,** which proposed to define two tactics used by drug companies to make it easier for the Federal Trade Commission to **prosecute** them: “**product-hopping**,” when drugmakers withdraw older versions of their drugs from the market to push patients toward newer, more expensive ones, and “**patent-thicketing**,” when drugmakers amass a series of patents to drag out their exclusivity and slow rival generics makers, who must challenge those patents to enter the market once the initial exclusivity ends. **PhRMA opposed the bill.** **The next day, it gave Cornyn $1,000**. Cornyn and Blumenthal’s bill would have been “very tough on the techniques that pharmaceutical companies use to extend patent protections and to keep prices high,” Feldman said. “The **pharmaceutical industry lobbied tooth and nail against it**,” she said. “And **when the bill finally came** out of committee, the strongest provisions — the **patent-thicketing provisions — had been stripped**.” In the months after the bill cleared committee and waited to be taken up by the Senate, Cornyn blamed Senate Democrats for blocking the bill while trying to secure votes on legislation with more direct controls on drug prices. The Senate has not voted on the bill.

#### Infrastructure reform solves Existential Climate Change – it results in spill-over.

USA Today 7-20 7-20-2021 "Climate change is at 'code red' status for the planet, and inaction is no longer an option" <https://www.usatoday.com/story/opinion/todaysdebate/2021/07/20/climate-change-biden-infrastructure-bill-good-start/7877118002/> //Elmer

**Not long ago**, **climate change** for many Americans **was** like **a distant bell**. News of starving polar bears or melting glaciers was tragic and disturbing, but other worldly. Not any more. **Top climate scientists** from around the world **warned of a "code red for humanity**" in a report issued Monday that says severe, human-caused global warming is become unassailable. Proof of the findings by the United Nations' Intergovernmental Panel on Climate Change is a now a factor of daily life. Due to **intense heat waves and drought**, 107 wildfires – including the largest ever in California – are now raging across the West, consuming 2.3 million acres. Earlier this summer, hundreds of people died in unprecedented triple-digit heat in Oregon, Washington and western Canada, when a "heat dome" of enormous proportions settled over the region for days. Some victims brought by stretcher into crowded hospital wards had body temperatures so high, their nervous systems had shut down. People collapsed trying to make their way to cooling shelters. Heat-trapping greenhouse gases Scientists say the event was almost **certainly made worse and more intransigent by human-caused climate change**. They attribute it to a combination of warming Arctic temperatures and a growing accumulation of heat-trapping greenhouse gases caused by the burning of fossil fuels. The **consequences of** what mankind has done to the atmo**sphere are now inescapable**. Periods of **extreme heat** are projected to **double** in the lower 48 states by 2100. **Heat deaths** are far **outpacing every other form of weather killer** in a 30-year average. A **persistent megadrought** in America's West continues to create tinder-dry conditions that augur another devastating wildfire season. And scientists say **warming oceans** are **fueling** ever **more powerful storms**, evidenced by Elsa and the early arrival of hurricane season this year. Increasingly severe weather is causing an estimated $100 billion in damage to the United States every year. "It is honestly surreal to see your projections manifesting themselves in real time, with all the suffering that accompanies them. It is heartbreaking," said climate scientist Katharine Hayhoe. **Rising seas** from global warming Investigators are still trying to determine what led to the collapse of a Miami-area condominium that left more than 100 dead or missing. But one concerning factor is the corrosive effect on reinforced steel structures of encroaching saltwater, made worse in Florida by a foot of rising seas from global warming since the 1900s. The clock is ticking for planet Earth. While the U.N. report concludes some level of severe climate change is now unavoidable, there is still a window of time when far more catastrophic events can be mitigated. But mankind must act soon to curb the release of heat-trapping gases. Global **temperature** has **risen** nearly **2 degrees** Fahrenheit since the pre-industrial era of the late 19th century. Scientists warn that in a decade, it could surpass a **2.7**-degree increase. That's **enough** warming **to cause catastrophic climate changes**. After a brief decline in global greenhouse gas emissions during the pandemic, pollution is on the rise. Years that could have been devoted to addressing the crisis were wasted during a feckless period of inaction by the Trump administration. Congress must act Joe Biden won the presidency promising broad new policies to cut America's greenhouse gas emissions. But Congress needs to act on those ideas this year. Democrats cannot risk losing narrow control of one or both chambers of Congress in the 2022 elections to a Republican Party too long resistant to meaningful action on the climate. So what's at issue? A trillion dollar **infrastructure bill** negotiated between Biden and a group of centrist senators (including 10 Republicans) is a start. In addition to repairing bridges, roads and rails, it would **improve access** by the nation's power infrastructure **to renewable energy sources,** **cap millions of abandoned oil and gas wells spewing greenhouse gases**, **and harden structures against climate change**. It also **offers tax credits for** the **purchase of electric vehicles** and funds the construction of charging stations. (**The nation's largest source of climate pollution are gas-powered vehicles**.) Senate approval could come very soon. Much **more is needed** if the nation is going to reach Biden's necessary goal of cutting U.S. climate pollution in half from 2005 levels by 2030. His ideas worth considering include a federal clean electricity standard for utilities, federal investments and tax credits to promote renewable energy, and tens of billions of dollars in clean energy research and development, including into ways of extracting greenhouse gases from the skies. Another idea worth considering is a fully refundable carbon tax. **The vehicle** for these additional proposals **would be a second infrastructure bill**. And if Republicans balk at the cost of such vital investment, Biden is rightly proposing to pass this package through a process known as budget reconciliation, which allows bills to clear the Senate with a simple majority vote. These are drastic legislative steps. But drastic times call for them. And when Biden attends a U.N. climate conference in November, he can use American progress on climate change as a mean of persuading others to follow our lead. Further delay is not an option.

### 1NC – CP

#### CP Text: Member Nations of the WTO ought to publicly declare the ruling of TRIPS to be invalid and abolish statutory regulations put in place by TRIPS, and exclude patent applications based on Indigenous knowledge from patentability for all products except medicines.

#### Analytic CPs are good to test the desirability of critical affs, teams manipulate literature to frame it in a way that says something not justified by their evidence, if their cards don’t make the arguments then allowing negatives to point out their appropriation of scholarship is good.

#### No medicines key warrant means the CP resolves violence by TRIPS, solves the root of biopiracy which is different sectors but accesses all of our case turns.

## Framing

#### The role of the ballot is to evaluate the desirability of the hypothetical consequences of voting affirmative. Anything else is arbitrary, self serving and infinitely regressive which matters because it makes negating impossible and turns the aff into nothing more than a quirky “fyi”

#### Group Barker and Held, these cards don’t have a ballot key warrant. If we win that their scholarship is worse for Indigenous communities which are all our case turns then they cant solve.

#### Mukuka is a double turn with Barker/Held, their cards talks about Canada signing a bill and why that’s not a great start, using the political is contradictory with their praxis and even then they aren’t a resistance movement if we turn their offense which should frame all your framing args.

#### IR scenario analysis unlocks intellectual openness to overcome cognitive biases.

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Added-value of scenario analysis for IR scholarship

As Tomé and Açıkalın (2019) point out, in order to fill the gap between IR theory and real-world problems, “an increasing number of scholars have come to embrace a spirit of intellectual openness, recognizing both the need for greater flexibility in the theoretical formulations and the possibility of complementarity by other theories and approaches” (p. 12). This section discusses the added value of scenario analysis as a complementary approach to traditional IR methods. The most obvious advantage of scenario analysis as a methodology, grounded in the reservoir of foresight studies, lies by definition in its ability to tackle future events. As mentioned before, there are no specified instruments within traditional IR methods which would allow scholars to go beyond past and present. The only exception is forecasting, one of the formal methods in IR, which is, however, distinctly different from foresight.

The underlying logic of forecasting is to provide predictions about the future by drawing on mathematical models and big data-sets based on known patterns. Thus, it is not particularly suitable to accommodate discontinuities. Foresight, as described above, aims at going beyond existing patterns by developing alternative futures based on an innovative combination of multiple driving forces. Its goal is to capture a set of possible futures and learn from them by examining the causal relations between driving forces and their different evolutions. By applying scenario approaches, scholars can thus account for evolving dynamics and discuss such timely issues as the consequences of Brexit for both British and EU-security, economics and politics (Brakman, Garretsen, & Kohl, 2018; Martill & Sus, 2018; Musolff, 2017; Verschueren, 2017; Ziv et al., 2018). Yet, scenario analysis offers more than the possibility to talk about the future. We see a fourfold merit of adding scenario analysis to the range of methods applied by IR scholars.

Confronting enduring assumptions

As we presented in the previous section, the main feature of explorative scenarios, which are the subject of this paper, is to stimulate creative thinking by challenging the deeply held assumptions of their authors. In other words, this method is helpful for overcoming enduring cognitive biases—mental errors such as linearity, presentism, and group think caused by the subconscious and simplified information processing of humans (Heuer, 1999, pp. 111– 112). Humans have the tendencies to focus on the present at the expense of the future and to think about the future in linear terms by extrapolating past trends into the future. As Gaddis (1992) points out, “we tend to bias our historical and our theoretical analyses too much toward continuity (…) we rarely find a way to introduce discontinuities into theory, or to attempt to determine what causes them to happen” (p. 52). Even if Gaddis does not explicitly mention scenarios, he refers to the concepts underlying scenario approaches (Han, 2011, p. 51). Scenario analysis attends to “deeper, otherwise left implicit, assumptions about continuous and linear patterns of development” (Wilkinson et al., 2013, p. 707). The process of scenario development invites the participants to reveal and question convictions which have so far remained unchallenged, and to question the linearity of world developments.

The ability of reexamining one’s own assumptions and going beyond linear patterns of development is essential for IR scholarship. To illustrate it with two examples: IR scholars and historians did not think that the Soviet Union could collapse and were startled by its fall, the peaceful resolution of the Cold War and the transformation of the bipolar system (Davis, 2005; Gaddis, 1992). In a similar vein, United States scholars were for decades so convinced of China’s economic, political, and cultural limitations that they neglected the possibility of its sudden ascent and were taken by surprise when it happened (Hundley, Kenzer, & Peterson, 2015). Interestingly, since the rise of China became evident, the United States debate on its future has been marked by a similar linearity of thought, leading to single-outcome predictions of China’s long-term future (Kerbel, 2004). In both cases, the discipline proved incapable of anticipating events of such importance, because scholars took for granted the status quo instead of confronting their bias towards linearity and detect manifestations of upcoming change. As a result, two major geopolitical surprises—the end of the Cold War and the rise of China have at first been neglected, forcing academia to catch up.

Against this backdrop, foresight helps IR scholars to exit the tunnel vision on world affairs and discover potentially valuable nonlinear lines of development. These can be both innovative in terms of scholarship, and policy-relevant by offering a reflection on unexpected discontinuities. Thus, it can facilitate the intellectual capability to think the unthinkable (Porter, 2016, p. 259).

Bringing forward new research questions

Scenario analysis starts with confronting one’s enduring assumptions and developing multiple causal possibilities, through which scholars can potentially discover topics that have not been examined before. One of the greatest challenges for any scholar is to identify innovative venues for research that might bring the discipline forward and advance publicity for one’s work. In Lakatosian terms, such an ability is often considered an evidence of a progressive research program.10 Since the prime feature of scenario analysis is to detect rapid and significant shifts in trajectories, or the forces behind them, this method succors when defining new pressing topics for academia. In particular, as mentioned in the previous section, scenario analysis enables the detection of both weak signals and wild cards. By drawing attention to these hitherto overlooked but potentially pressing issues, scenario analysis can identify research agendas for further investigation (Barma et al., 2016). Therefore, scenario analysis seems to be the right tool to advance innovative research since it helps scholars drive their research into new areas, away from moribund topics that have been followed for many decades. By “identifying questions of likely future significance” (Barma et al., 2016, p. 6), scenario analysis can contribute to combatting the proliferation of researchers in fields occupying the political status quo, such as Soviet or Japan studies in the United States in the 1980s. At the same time, innovative research topics confront the uncertainties that are crucial for policymakers to be monitored closely.

Dealing with the complexity and interdisciplinarity of real-world issues

Another added value of the scenario analysis for IR scholarship lies in its ability to provide comprehensive causal reasoning and thus to tackle complex issues. As mentioned in the introduction, the world’s complexity combined with abrupt shifts poses a challenge for IR scholarship. The possibility to accommodate multiple driving forces, to take into account different values they might take and finally to combine them with each other and see how they affect the dependent variable, makes the scenario approach quite unique. Traditional IR methods work with a limited number of independent variables, formulate and test hypotheses usually based on the relation between a single causal variable and the dependent variable. Investigating complex causal trajectories is therefore not possible. Against this background, we agree with Barma et al. (2016) and his colleagues who argue that scenarios are highly apt for dealing with complexity and uncertainty and providing academia with a tool for “actionable clarity in understanding contemporary global issues” (p. 1).

Moreover, the scenario approach helps to tackle the challenges of interdisciplinarity that is tied to complexity. By drawing on the active participation of people from different disciplines, backgrounds, and with different expertise in the scenario development process, it brings interdisciplinarity to the table by default. The key advantage of the approach is that this interdisciplinary conversation takes place prior to and during the research phase, rather than after it. This distinguishes the scenario approach from other methods that bring interdisciplinary perspectives together but do not facilitate a discussion between them, rather letting them passively co-exist. By exploring the dynamics between seemingly unrelated vectors of change (key drivers), scenario analysis can be useful for shedding light on developments that would have been overlooked by narrower research designs. In security studies, for example, scenario analysis can connect the dots between hard, soft, traditional and non-traditional understandings of security and capture the interplay of economic-societalenvironmental and technological changes. Imposing interdisciplinarity also helps to counter the “hyper-fragmentation of knowledge” that “makes it difficult for even scholars in different disciplines to understand each other, much less policy-makers and general public” (Desch, 2015, p. 381).

Complex real-world issues that were tackled using scenario analysis include the Israel-Palestine conflict (Stein et al., 1998), Turkey’s geopolitical environment (Çelik & Blum, 2007), the prospects of the United States– China conflict (Friedberg, 2005) and the consequences of Brexit for EU foreign and security policy (Martill & Sus, 2018). An examination of these topics without the application of interdisciplinary approaches would not be possible precisely due to their multifaceted character.

Stepping out of the ivory tower

Finally, scenario analysis also enables IR scholars to establish a channel of communication with policy-makers other than conducting interviews for their own research or providing ad-hoc consultations. A participatory scenario process forges “deep and shared understanding between its participants” (Ramírez & Wilkinson, 2016, p. 21). In scenario workshops, academics and policy-makers work together, confront their world visions and assumptions and arrive at an agreement upon which they develop narratives for alternative futures. Hence, scenario analysis can be perceived as a tool towards more exchange between academia and policy-making that can contribute to a better understanding between the two worlds. For policymakers, it provides the opportunity to consider long-term trends (an occasion not often found in the day-to-day nature of politics). For academics, it provides insight into which trends are most concerning for policy-makers, allowing them to check and ultimately enhance the relevance of their research agendas.

We acknowledge the difficulty to engage policy-makers in foresight exercises caused by their time-constrains and possible lack of interest. Yet, in our experience, this problem mostly refers to high-level policy-makers. Mid-level and former officials and policy-makers have more time and willingness to participate in foresight exercises and contribute equally valuable perspectives. The participatory character of foresight exercises facilitates the exchange of views from different stakeholders on an equal level. In our case, as the evaluation has shown, it has proven to be stimulating for each of the engaged groups.

Moreover, the policy dialogue benefits from scenarios’ accessibility to a broader audience. Scenario publications tend to be shorter and easier to read than the average academic publication and as Nye (2008) rightly notes “a premium on time is a major difference between the two cultures” of academia and policy-making. Since scenario publications are more suitable to the time- and attention-constraints of many policy-makers, they improve the accessibility of research findings for the policy world (Cairney & Kwiatkowski, 2017). An illustrative example is offered by a foresight exercise conducted by the Aspen Institute Berlin in 2017. A group of academics, think tank experts and policy-makers developed scenarios on the future of the liberal world order that served as raw material for a newspaper from the future titled “The Aspen Insight” and dated October 21, 2025. Not only did the presentation of the newspaper catch the attention of many Berlin-based policy-makers but the “The Aspen Insight” was also attached as a supplement to the Berlin daily Tagesspiegel, and reached more than 300,000 readers.11

We acknowledge that the four aspects of the added value of scenario analysis for IR scholarship are interrelated and that their boundaries are not clear-cut. Yet, we believe, they highlight distinct benefits of this approach for academics that want to tackle the challenges of today’s world via their research.

#### AT Extinction Bad –

#### 1] Existential fears need not be settler projections of demise but can be contingently appropriated to reverse indigenous erasure

Weiss 15—Ph.D. candidate, Anthropology, University of Chicago (Joseph, “UNSETTLING FUTURES: HAIDA FUTURE-MAKING, POLITICS AND MOBILITY IN THE SETTLER COLONIAL PRESENT,” Dissertation submitted to the Faculty of the Division of Social Sciences, Department of Anthropology, University of Chicago, December 2015, 223-232, dml)

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.

#### 2] Futurism in the context of evaluating existential risks is desirable.

Tim Stevens 18. Senior Lecturer in Global Security at Kings College London. Millennium: Journal of International Studies. “Exeunt Omnes? Survival, Pessimism and Time in the Work of John H. Herz”. 2018. pp. 283-302.

Herz explicitly combined, therefore, a political realism with an ethical idealism, resulting in what he termed a ‘survival ethic’.65 This was applicable to all humankind and its propagation relied on the generation of what he termed ‘world-consciousness’.66 Herz’s implicit recognition of an open yet linear temporality allowed him to imagine possible futures aligned with the survival ethic, whilst at the same time imagining futures in which humans become extinct. His pessimism about the latter did not preclude working towards the former.

As Herz recognized, it was one thing to develop an ethics of survival but quite another to translate theory into practice. What was required was a collective, transnational and inherently interdisciplinary effort to address nuclear and environmental issues and to problematize notions of security, sustainability and survival in the context of nuclear geopolitics and the technological transformation of society. Herz proposed various practical ways in which young people in particular could become involved in this project. One idea floated in the 1980s, which would alarm many in today’s more cosmopolitan and culturally-sensitive IR, was for a Peace Corps-style ‘peace and development service’, which would ‘crusade’ to provide ‘something beneficial for people living under unspeakably sordid conditions’ in the ‘Third World’.67 He expended most of his energy, however, from the 1980s onwards, in thinking about and formulating ‘a new subdiscipline of the social sciences’, which he called ‘Survival Research’.

68 Informed by the survival ethic outlined above, and within the overarching framework of his realist liberal internationalism, Survival Research emerged as Herz’s solution to the shortcomings of academic research, public education and policy development in the face of global catastrophe.69 It was also Herz’s plea to scholars to venture beyond the ivory tower and become – excusing the gendered language of the time – ‘homme engagé, if not homme révolté’.70 His proposals for Survival Research were far from systematic but they reiterated his life-long concerns with nuclear and environmental issues, and with the necessity to act in the face of threats to human survival. The principal responsibilities of survival researchers were two-fold. One, to raise awareness of survival issues in the minds of policy-makers and the public, and to demonstrate the link between political inaction now and its effect on subsequent human survival.

marked

Two, to suggest and shape new attitudes more ‘appropriate to the solution of new and unfamiliar survival problems’, rather than relying on ingrained modes of thought and practice.71 The primary initial purpose, therefore, of Survival Research would be to identify scientific, sociocultural and political problems bearing on the possibilities of survival, and to begin to develop ways of overcoming these. This was, admittedly, non-specific and somewhat vague, but the central thrust of his proposal was clear: ‘In our age of global survival concerns, it should be the primary responsibility of scholars to engage in survival issues’.72 Herz considered IR an essential disciplinary contributor to this endeavour, one that should be promiscuous across the social and natural sciences. It should not be afraid to think the worst, if the worst is at all possible, and to establish the various requirements – social, economic, political – of ‘a livable world’.73 How this long-term project would translate into global policy is not specified but, consistent with his previous work, Herz identified the need for shifts in attitudes to and awareness of global problems and solutions. Only then would it be possible for ‘a turn round that demands leadership to persuade millions to change lifestyles and make the sacrifices needed for survival’.

74 Productive pessimism and temporality

In 1976, shortly before he began compiling the ideas that would become Survival Research, Herz wrote:

For the first time, we are compelled to take the futuristic view if we want to make sure that there will be future generations at all. Acceleration of developments in the decisive areas (demographic, ecological, strategic) has become so strong that even the egotism of après nous le déluge might not work because the déluge may well overtake ourselves, the living.

Of significance here is not the appeal to futurism per se, although this is important, but the suggestion this is ‘the first time’ futurism is necessary to ensuring human survival. This is Herz the realist declaring a break with conventional realism: Herz is not bound to a cyclical vision of political or historical time in which events and processes reoccur over and again. His identification of nuclear weapons as an ‘absolute novum’ in international politics demonstrates this belief in the non-cyclical nature of humankind’s unfolding temporality.76 As Sylvest observes of Herz’s attitude to the nuclear revolution, ‘the horizons of meaning it produced installed a temporal break with the past, and simultaneously carried a promise for the future’.

This ‘promise for the future’ was not, however, a simple liberal view of a better future consonant with human progress. His autobiography is clear that his experiences of Nazism and the Holocaust destroyed all remnants of any original belief in ‘inevitable progress’.78 His frustration at scientism, technocratic deception, and the brutal rationality of twentieth-century killing, all but demanded a rejection of the liberal dream and the inevitability of its consummation. If the ‘new age’ ushered in by nuclear weapons, he wrote, is characterized by anything, it is by its ‘indefiniteness of the age and the uncertainties of the future’; it was impossible under these conditions to draw firm conclusions about the future course of international politics.79 Instead, he recognised the contingency, precarity and fragility of international politics, and the ghastly tensions inherent to the structural core of international politics, the security dilemma.

80 Herz was uneasy with both cyclical and linear-progressive ways of perceiving historical time. The former ‘closed’ temporalities are endemic to versions of realist IR, the latter to post-Enlightenment narratives feeding liberal-utopian visions of international relations and those of Marxism.81 In their own ways, each marginalizes and diminishes the contingency of the social world in and through time, and the agency of political actors in effecting change. Simultaneously, each shapes the futures that may be imagined and brought into being. Herz recognised this danger. Whilst drawing attention to his own gloomy disposition, he warns that without care and attention, ‘the assumption may determine the event’.82 As a pessimist, Herz was alert to the hazard of succumbing to negativity, cynicism or resignation. E.H. Carr recognised this also, in the difference between the ‘deterministic pessimism’ of ‘pure’ realism and those realists ‘who have made their mark on history’; the latter may be pessimists but they still believe ‘human affairs can be directed and modified by human action and human thought’.83 Herz would share this anti-deterministic perspective with Carr. Moreover, the possibility of agency is a product of a temporality ‘neither temporally closed nor deterministic, neither cyclical nor linear-progressive; it is rooted in contingency’.

#### Risks harm native communities first because rich communities hoard resources leaving native communities as sacrificial in the midst of war. Preventing risks is not settler colonialist and you shouldn’t subject Indigenous people to death even if some authors think risk prevention is bad. Winning a large enough risk of our offense will answer all of their framing arguments, unless you can fully conclude reducing a high chance of an existential risk is bad, vote neg.

## Advantage

#### Top-Level – the Aff solves none of the Case – card zero has a medicine key warrant – ask yourself which evidence is medicine-specific - this zaps the Aff solvency to zero – the amount of biopiracy stays the same since they’ll either just 1] continue bioprospecting with the same intensity, but for agriculture and food, not medicine or 2] patent food, then claim its medicinal properties which circumvents the plan.

#### Multiple Alt causes to the Aff – crops, cosmetics, food.

Silva 20 [Daniella Silva (reporter for NBC News focusing on the economic recovery and its effect on families, as well as immigration). “Biopiracy: the largely lawless plundering of Earth’s genetic wealth”. Landscape News. 15 December 2020. Accessed 8/26/21. <https://news.globallandscapesforum.org/48905/biopiracy-the-largely-lawless-plundering-of-earths-genetic-wealth/> //Xu+Elmer]

**Commercialization of genetic resources** is a booming business. **From** drugs and **cosmetics to teas and genetically modified crops,** **plant and animal materials are ubiquitous in consumer markets**. Many of these products are **aggressively protected** **by patents** that profess the products’ “novelty” and “innovativeness.” But these products are arguably neither new nor innovative, as their use of genetic resources has been developed based on existent traditional knowledge of the natural world, often held among Indigenous groups and rural farmers. Yet, these traditional knowledge holders are rarely compensated for their role in producing and safeguarding the biodiversity from which the patent-holders profit. This phenomenon is known as biopiracy. The term biopiracy was coined in the early 1990s by Pat Mooney, founder of ETC Group – an organization which works to protect the world’s most vulnerable people from socioeconomic and environmental impacts of new technologies – to describe the theft or misappropriation of genetic resources and traditional knowledge through the intellectual property system. It also encompasses unauthorized and uncompensated collection of genetic resources for commercial purposes. One of the most widely cited examples of biopiracy is that of U.S. multinational corporation W.R. Grace’s 1994 patent for a neem tree seed extract used in their antifungal spray, Neemex. Although the company claimed its patent was the product of a unique invention, neem extracts had been used by rural farmers in India for more than 2,000 years in insect repellants, soaps and contraceptives. After years of activists and farmers fighting the patent, it was overturned by the Environmental Protection Organization (EPO) in 2000 due to “lack of novelty and innovative step.” While the neem patent was overturned, it is often difficult to legislate against biopiracy as the term has no single legal definition, and regulations around it differ by region. This ambiguity leaves plenty of room for countless cases of companies patenting everything from gene sequences to crop varieties to human cell lines without fairly compensating the countries and communities of origin. It’s not that the intellectual property system is invalid, notes Susan Bragdon, director of Seeds For All and policy advisor at Oxfam Novib. But when it comes to traditional knowledge holders and Indigenous rights, “the patent and intellectual property system wasn’t designed to provide benefits to communities,” she says. Critics of the current patent system, including Mooney, believe that current intellectual property regimes threaten Indigenous rights, favor monopolies over biodiversity and increase social inequities because they allow powerful people and groups to own the most basic building blocks of life. The specter of colonialism Biopiracy is historically rooted in colonialism. Top commodities like sugar, pepper, quinine and coffee were all taken from formerly colonized countries via Western trading companies that plundered local ecologies for profit. Today, environmental activists like the prolific Indian author and researcher Vandana Shiva have argued that patenting genetic material or other components of living organisms is comparable to “the second coming of Columbus” because of how it has reinforced colonial power dynamics between the Global North and South. “90 percent of genetic resources are in the South and 90 percent of patents are in the North,” noted Green Member of European Parliament Sandrine Bélier in an interview with EurActive. Another parallel Shiva draws between biopiracy and colonialism is in the way that pirated seed resources are used to create forced crop monopolies. In her book, “Biopiracy: the plunder of nature and knowledge,” Shiva cites how Monsanto took steps to flood the Indian marketplace with patented cotton seeds in the early 2000s, which resulted in a cotton monopoly that sent many farmers into debt because of the steep price increases and royalties Monsanto charged for their special seeds. Such categorical rules over a market also prevent local farmers from saving and sharing seeds to propagate diverse crops that are well adapted to microclimates and specific conditions, as they have often done for centuries. “There is a fundamental clash between the idea of (Western) technological progress and the idea that no one group or individual has a ‘right’ to monopolize genetic resources,” says Manuel Ruiz Muller, director and principal researcher of the Peruvian Society for Environmental Law (SPDA). “Cultural and human rights often collide with economic rights and intellectual rights.” Toward fair access and benefit sharing The key question is: how can humans share in the use of the Earth’s genetic resources while protecting the rights of smaller actors like developing governments, local communities and Indigenous people? While there are many pieces of legislation dealing with biopiracy and intellectual property rights, the U.N. Convention on Biological Diversity (CBD) and its Nagoya Protocol on access and benefit sharing have been especially influential. The Nagoya Protocol is an international legal framework under the CBD that aims for fair benefit sharing of profits associated with use of genetic resources. It obliges governments and the private sector to establish transparent, mutually agreed-upon terms for how benefits from the use of genetic resources will be shared. But the current framework is riddled with pitfalls. In 25 years, few access and benefits contracts – which legally dictate fair and equitable sharing of benefits from genetic resources – have come about as a result of the Nagoya Protocol, and those that have often result in trivial profits flowing back to traditional knowledge holders, according to an article from Intellectual Property Watch. Access and benefits contracts for genetic materials do not always result in a direct commercial application, and even when they do, the percentage of benefits that flow back to communities can be as low as 0.1 percent of total corporate profits, according to an article from Trade for Development News. “You’ve noticed the piles of money pouring into the coffers of Indigenous peoples and peasants around the world because of access and benefits agreements, right?” Mooney asks with sarcasm. “Of course not. It’s virtually nothing.” Some experts including professor of international governance at the University of Leeds, Graham Dutfield, argue that ending biopiracy would require ceding political space to Indigenous and marginalized groups so that they are on more equal footing to negotiate benefit sharing. But even when political goodwill is present, there are many practical barriers to successful access and benefits regimes. It is possible to have multiple traditional knowledge holders across different countries for the same herbal medicine, for example. In such situations, it is not clear with whom pharmaceutical companies hoping to develop a drug should negotiate benefits or how those benefits will be shared with diverse cultural groups. “I think access and benefit sharing hasn’t proven to be a good mechanism to reward and incentivize communities that are shepherding and managing biodiversity,” says Bragdon. “There haven’t been sufficient benefits to halt the erosion of biodiversity. I think it’s been highly problematic.” Digital Dilemma Additionally, access and benefits agreements often interpret genetic resources as physical matter, which ignores the modern reality of digital DNA and cloud storage. Researchers can freely access many gene banks without agreeing to disclose potential commercial applications or share benefits resulting from their work. “The issue [with biopiracy] today is that companies and private actors can take out patents on digital sequences of DNA – it’s not just about the physical seeds,” says Mooney. “We see companies sucking up all the genetic information they can and storing it on their proprietary clouds.” There are talks of including digital sequencing information (DSI) – disembodied pieces of genetic code – in the CBD, meaning researchers and companies would have to pay to use and copy gene bank information. But the move has been met with resistance. A 2018 article in Science magazine argues that including DSI in an international agreement against biopiracy could “stifle research, hamper the fight against disease outbreaks, and even jeopardize food safety.” Both Mooney and Ruiz Muller are skeptical of these claims. “The critique is misplaced and has to be nuanced substantially,” says Ruiz Muller. The current CBD and Nagoya Protocol have a transactional approach to access and benefit sharing in which two parties negotiate a contract for the use of a particular genetic resource. Under such a system, he argues that including “natural information” – a better term for DSI – in a new framework could negatively impact research; it could lead to countries racing to claim sole jurisdiction over certain pieces of widespread genetic resources and actively competing against one another for contracts.

#### Ag is a massive alt cause.

Bhattacharya 14 [Sayan Battacharya, Department of Environmental Studies at Rabindra Bharati University in Kolkata, India], “Bioprospecting, biopiracy and food security in India: The emerging sides of neoliberalism”, International Letters of Social and Humanistic Sciences, SciPress Ltd, pg. 49-54, 2014 //SLC PK//Re-cut by Elmer

2. BIODIVERSITY, BIOPROSPECTING AND BIOPIRACY Historically there has been prolific scientific interest in the lifestyles, knowledge, cultures, histories, and worldviews of indigenous peoples. Rural communities depend on traditional knowledge for food, health and agriculture. This traditional knowledge forms the basic cultural identity for them, contributing to social cohesiveness and thereby reducing vulnerability and poverty. 80 % of the world’s populations, mostly the ‘undeveloped’ regions, still rely on the indigenous medicinal knowledge of local plants for their medical needs.3 In India, around 70 % of the population directly depends on land-based occupations, forests, wetlands and marine habitats for ecological livelihoods and cultural sustenance.4 Over 7500 species of plants and several hundred animal species and also metals and minerals are utilized by the folk tradition in India. The custodians and carriers of these traditions are tribal as well as non-tribals, including house wives and welders, thousand of herbal healers, bone setter, vishvaidyas, birth attendants, potters, gold-smiths, black smiths, barbers and even wandering monks. According to ASI, there are 4635 ethnic communities in India. In principle each of these communities could be having their own oral medical traditions that have been evolving across time and space.3 Traditional knowledge does not only include only the recorded knowledge of plants for medicinal use but also the oral knowledge that has been passed on from generations to generations. In India there have been a lot of cases where the indigenous knowledge has been tried to be taken away. Due to its easy access, it has been prone to piracy. According to UNDP Human Development Report 1999: “The South is the source of 90 per cent of the world’s biological wealth – India, for example, has 81,000 species of fauna and 47,000 of flora, including 15,000 plant varieties unique to the country – and yet industrial countries hold 97 per cent of all patents worldwide and are driving the rush to patent plant genetic resources.” 5 Today, the genomics revolution is fueling a new wave of scientific research in the form of bioprospecting, and it is impacting the lives of indigenous peoples around the world. Bioprospecting involves searching for, collecting, and deriving genetic materials from biodiversity samples that can be used in commercialized pharmaceutical, agricultural, industrial, or chemical processing end products.6 The megadiversity countries with 60-70 % of the world`s known biological diversity have significant stake for harnessing the potential of biotechnology and bioprospecting for achieving sustainable economic development.1 The Convention on Biological Diversity (CBD), the first international treaty provides opportunities to biodiversity rich countries to realize benefits arising out of the utilization of their bioresources. The CBD mentioned that national governments have authority to determine access to their genetic resources, and calls on governments to provide for conservation, sustainable use and equitable sharing of benefits from commercial use of those resources. Between 4 and 40 million biological species are still unknown in the world. New species are being discovered even today. In the last few decades, biotechnology has developed and played a vital role in the development of the agricultural, pharmaceutical and medical industries. As the importance of the biotechnology industry increases, many useful biotechnological inventions can earn their inventors millions of dollars. The real pirates are those developed countries, especially the US, who benefited and prospered from the plundering of natural resources from the developing and less developed countries without paying any royalty to the source countries at all. Between 25-50 % of current prescription pharmaceuticals come from plants, either directly or through modifications by biochemical methods, and the value of drugs to the U.S. pharmaceutical industry coming from plant species is estimated at over 30 billion USD per year.2 A multinational company or individual who wishes to develop a new product often makes use of the traditional knowledge of local people in deciding upon a plant, animal or other biological source to study. After the successful production of commercially useful products from those organisms, the company applies for a patent in its own name on those products. In most cases, the inventor not even acknowledges in his patent application that his product was derived from information provided by a local community. Biopiracy therefore can be described as the unjustified extraction of the environmental heritage and traditional knowledge from various regions of the earth for economic exploitation and industrial monopolization.7 Daniel F. Robinson distinguished between three different categories of biopiracy: “Patent-based biopiracy: The patenting of (often spurious) inventions based on biological resources and/or traditional knowledge that are extracted without adequate authorization and benefit-sharing from other (usually developing) countries, indigenous or local communities. Non-patent biopiracy: Other intellectual property control (through plant-variety protection or deceptive trademarks) based on biological resources and/or traditional knowledge that have been extracted without adequate authorization and benefit-sharing from other (usually developing) countries, indigenous or local communities. Misappropriation: The unauthorized extraction of biological resources and/or traditional knowledge from other (usually developing) countries, indigenous or local communities, without adequate benefit-sharing.” 8 2. 1. Global emergence of Biopiracy A recent report of United Nations Development Programme (UNDP) mentioned that “if unpaid royalty payments were being made to developing countries and indigenous peoples for the plant varieties and local knowledge used by multinational food and drug companies, those providers would earn approximately 5.4 billion USD per year”.2 Examples of countries not receiving their full share of these royalties include Tibet, India, Sri Lanka, South Africa, Samoa, Madagascar, Ecuador, Mexico and the Philippines. Since the 1980s, individual inventors or corporations in some countries, such as the United States, Japan, and some European countries, successfully lobbied government to permit exclusive rights to certain biological materials they developed through patenting. They were given exclusive rights to plant and/or reproduce and market them and have the right to prohibit others from planting, reproducing and selling the material provided. 2. 2. Biopiracy in India: few examples In the recent past, there have been several cases of biopiracy of traditional knowledge from India. First it was the patent on wound healing properties of haldi (turmeric).9 Curcuma longa, a type of turmeric, is an Indian herb that has been used as treatment for sprains, inflammatory conditions and wounds. The orange coloured root is native to the subcontinent and South East Asia, and for thousands of years has been a one of the major components of Ayurvedic medicine. In 1995, two US scientists from the University of Mississippi were granted US patent 5,401,504 on the use of turmeric. The scientists claimed that turmeric could heal wounds and claiming this to be novel. They have mentioned in their patent application that turmeric has long been used in India as a traditional medicine for treatment of various sprains and inflammatory conditions. But they claimed that there was no research on the use of turmeric as a healing agent for external wounds. The Indian government vigorously challenged the patent and provided numerous research papers predating the patent, proving that turmeric has long been used in India to heal wounds. As a result, the US Patent and Trademark office rejected all patent claims related to turmeric.10 The Neem tree case is another significant example of biopiracy of Indian medicinal plant. Azadirachtin is one of many active compounds present in bark, leaves, flowers and seeds of the Neem tree or Azadirachta indica. The remarkable properties of this compound have been utilized in India from ancient times in the form of extracts of various kinds produced by Indian farmers and small industrial firms in medicine and agriculture. Use of neem had been described in ancient Indian texts written over 2,000 years ago as an air purifier and effective medicine for almost all types of human and animal diseases because of its insect and pest repellant properties.9,10 A US timber importer studied the curing properties of neem and began importing neem seed to his company headquarter in Wisconsin since 1971. He successfully extracted a pesticidal agent from neem extract called Margosan-O. In 1985, the bio-pesticide derived from neem tree received clearance for the product from the US Environmental Protection Agency (EPA). The patent for the product was sold to the multinational chemical corporation, W.R. Grace after 3 years. Since then, many US and Japanese firms gained patents on formulae for stable neem-based solutions and emulsions and other products. The W.R.Grace approached several Indian manufacturers and industries to purchase their technology. The company ultimately managed to start a joint venture with a firm called P.J. Margo Pvt. Ltd to set up a plant in India. The plant processes up to 20 tonnes of seed a day and also established a network of neem seed suppliers in order to guarantee a constant supply of the seeds at a cheap price. In May 2000, a coalition of groups successfully overturned the patent held by the US company, WR Grace and the US Department of Agriculture over the Indian neem tree.10 Basmati is produced largely in Punjab, Western India and in Pakistan. Basmati rice has been one of the fastest growing export items from India in recent times. It is evident that Basmati has been grown for centuries in the subcontinent. After centuries of observation, experimentation and selection, the Indian farmers have developed numerous varieties of the rice to meet various ecological conditions, cooking needs and taste.9 On 2 September 1997, Texasbased RiceTec Inc. was granted patent number 5663484 for a new plant variety that is a cross between American long-grain rice and Basmati rice. RiceTec claimed that the new varieties have the same or better characteristics as the original Basmati rice and can be successfully grown in specified geographical areas in North America. The patent covers the genetic lines of the basmati and includes genes form the varieties developed by farmers. RiceTec has already been trading rice under brand names such as Kasmati, Texmati and Jasmati. RiceTec’s strain possesses the same qualities and characteristics of the Indian traditional varieties of Basmati. On the question of consumer deception, RiceTec clearly labels its product as ‘American type Basmati rice’.10 No case has been filed in the US so far by any interested party from the Indian subcontinent regarding this serious issue. By mid 2000, however, the Indian government decided to challenge some of the claims of the RiceTec patent. World’s largest importer of Basmati rice, Saudi Arabia and the UK, recognized that Basmati rice is unique to Northern India and Pakistan. Furthermore, the Agricultural and Processed Food Export Development Authority and Trade Mark Watch Agency of India have managed to win the Basmati patent case in at least 15 countries (including UK, Australia, France, Spain, Chile and the UAE). In the Basmati case, RiceTec’s action would really become a threat to the sales of Basmati rice from India, and could affect the economic conditions of the rice farmers in India. Karela (bitter gourd), Jamun (blackberry), Gumar and Brinjal, for instance, are commonly known in India for their anti diabetic characteristics. Their usees are so common in India that there is no novelty involved while using them for curbing diabetes. A patent was, however, obtained in the U.S. by three NRIs for their utilization as a cure for diabetes.11 North East India is very rich in flora especially in cultivation of medicinal plants by the tribes. Resource-rich Nagaland is plagued by bio-piracy with rare medicinal herbs, orchids and other endangered species being smuggled out of the state. These plants are being borne off by pharmaceutical companies for commercial benefits. Ginseng, taxus baccata and cephallu taxus and paris cordifolia have medicinal properties and are often smuggled to Myanmar.12 Some cases have been highlighted with a success story, but there are also numerous stories of deprivation in the context of biopiracy. Corporate patents usually do not recognize or compensate the indigenous people who are the main conservators of those resources. Indigenous communities, over the centuries, have identified and classified plants native to their lands and found their beneficial characteristics. But, the tribes do not have access to legal information that would protect their plants and cultural knowledge nor do they have the finances to obtain them.9 The profit incentive companies often overexploit the beneficial plant resources for commercial use, which ultimately result in the loss of forests and genetic material, crisis of land, plants and cultural knowledge of the indigenous communities. 2. 3. Biopiracy and food security The stealing of biological resources and indigenous knowledge would affect food security, livelihood of indigenous people, and consumers’ choice. More than 70 % of our food supply is dependent on a small number of edible plant resources, mainly wheat, maize, rice, and potato, which are fundamental to food security. **Patenting** of these plants varieties will definitely pose threat to the consumers. The patenting of biological technology will encourage monopoly control of plant material by Western transnational corporations. Farmers will become dependent of on corporations for their input in **agriculture**, **i.e. seeds, fertilizers, pesticides and herbicides.** It has particularly troubling implications for the developing world as the farmers cannot afford to buy seed each year and traditionally set aside a portion of their harvest to plant in the next growing season. Moreover, with the introduction of the genetically modified crops and high yielding varieties, the local crop varieties are being lost and outcompeted.13 The farmer’s rights to choose the desired crops have become difficult to implement. The technology can execute a devastating effect on the economy and food security of the farmers in developing world and can eventually destroy the locally adapted, inexpensive traditional crop varieties.14 The entire process will eventually lead to the monopolization of trade, which is ultimately against the principle of free trade fostered by the World Trade Organization (WTO). **India’s agriculture** being rich in bio-diversity **has been** always been an easy **prey for big corporations engaging in agribusiness** for the purpose of bio-piracy.15 **Monsanto**, for instance, **tried to spread genetically modified brinjals** in India in the form of Bt Brinjals in spite of the fact that India itself is a source of over 2500 different unique varieties of brinjals.16 Monsanto’s attempt of taking over the market was opposed by the public forcing the government to ban it for an indefinite period of time.16 But Monsanto is still **stealing native crops**, including brinjals, and quietly working on GM varieties of them in test fields, which is a clear violation of India's Biological Diversity Act 2002 (BDA). The farmer variety has been used by Monsanto in its breeding programs without taking prior permission from Indian farmers and without entering into any kind of benefit sharing agreement with them. This is not just grossly unethical; it is in violation of international agreements like the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources (ITPGR) which recognize the rights of the farming community over the genetic wealth used in agriculture.17

#### Alt Causes is offense – it’s a guise for the Settler State to continue violence under the guise of benevolence drawing Indigenous movements into a trick of time by false reforms.

#### AT solvency – 1] This isn’t offense – the warrant in this is not other non-Indigenous Patent holders can’t have patents BUT that no one should since IP is intrinsically anti-ethical to Indigenous Cultures

#### The most efficacious mainstream drugs come from Indigenous Knowledge – empirics are on our side.

King 91 Stephen King September 1991 "The Source of Our Cures: A new pharmaceutical company wants to provide reciprocal benefits and recognize the value of indigenous" <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/source-our-cures-new-pharmaceutical-company-wants-provide> //Elmer

**FOR 500 YEARS**, SINCE THE People of South America encountered Europeans on their soil, **the global pharmacopoeia** has been **enriched by a number of important plant-derived medicines discovered and utilized by indigenous people**. The skeletal **muscle relaxant d-tubocurarine** is derived from an Amazonian arrow poison better known as curare, Chonodendron tomentosum. The **antimalarial drug quinine**, obtained from the bark of the several species on Cinchona trees, was first called "Indian fever bark" by the Europeans until the name "Jesuit fever bark" became more popular. Quinidine, also produced from the bark of Cinchona species, is now used as an antiarrhythmic for people with cardiac problems. An important amoebocide and emetic drug **emetine**, obtained from the roots of Cephalis ipecacuana, was utilized by indigenous people in Brazil **to treat dysentery**. One of the world's most important local anesthetics, cocaine is derived from the leaves of Erthroxylum coca and is still used today as medicine by thousands of people in the Andean region of South America. **Pilocarpine**, a drug **used to treat glaucoma**, is derived from the plant Pilocarpups jaborandi and was utilized by indigenous people in Brazil as medicine. These are only a few examples of the mainstream drugs that have been developed based on the - acknowledged - traditional wisdom of indigenous people. Roughly **74 percent of the 121** **plant-derived compounds** currently **used in the global pharmacopoeia** h**ave been discovered through research based on** ethnobotanical information on the **use** of plants **by indigenous people**. It is well known that tropical forest ecosystems contain a tremendous diversity of plant species. Estimates cite a minimum of 250,000 flowering plant species worldwide, at least 90,000 of which are found in the neotropics. Fewer than one percent of these plants have been investigated even superficially for potential pharmacological activity. A surprisingly large proportion of this plant biodiversity is classified, utilized, and actively managed by indigenous and local people of tropical regions. Tropical forest people have a profound knowledge about the utility, of plants found in their environment - an observation confirmed by ethnobotanical and ethnopharmacological research in the past decade (see references). At the same time interdisciplinary research by anthropologists, ecologists, geographers, and tropical agrnomists has shown that indigenous people and rural inhabitants of the neotropics have been - and continue to - actively managing plant genetic resources in their environment (Balee and Posey 1989; Irvine 1987; Denevan and Padoch 1988; Posey 1985); plants used as medicine are often moved and maintained as cultivated or wild/cultivated medical resources.

#### Yes link, 80 percent needs it

Bhattacharya 14 [Sayan Battacharya, Department of Environmental Studies at Rabindra Bharati University in Kolkata, India], “Bioprospecting, biopiracy and food security in India: The emerging sides of neoliberalism”, International Letters of Social and Humanistic Sciences, SciPress Ltd, pg. 49-54, 2014 //SLC PK //re-cut by Elmer

2. BIODIVERSITY, BIOPROSPECTING AND BIOPIRACY Historically there has been prolific scientific interest in the lifestyles, knowledge, cultures, histories, and worldviews of indigenous peoples. Rural communities depend on traditional knowledge for food, health and agriculture. This traditional knowledge forms the basic cultural identity for them, contributing to social cohesiveness and thereby reducing vulnerability and poverty. **80 % of the world’s populations**, mostly the ‘undeveloped’ regions, still **rely on the indigenous medicinal knowledge** of local plants for their medical needs.3 In India, around 70 % of the population directly depends on land-based occupations, forests, wetlands and marine habitats for ecological livelihoods and cultural sustenance.4 Over 7500 species of plants and several hundred animal species and also metals and minerals are utilized by the folk tradition in India. The custodians and carriers of these traditions are tribal as well as non-tribals, including house wives and welders, thousand of herbal healers, bone setter, vishvaidyas, birth attendants, potters, gold-smiths, black smiths, barbers and even wandering monks. According to ASI, there are 4635 ethnic communities in India. In principle each of these communities could be having their own oral medical traditions that have been evolving across time and space.3 Traditional knowledge does not only include only the recorded knowledge of plants for medicinal use but also the oral knowledge that has been passed on from generations to generations. In India there have been a lot of cases where the indigenous knowledge has been tried to be taken away. Due to its easy access, it has been prone to piracy. According to UNDP Human Development Report 1999: “The South is the **source of 90 per cent of the world’s biological wealth** – **India**, for example, **has 81,000 species of fauna and 47,000 of flora**, including 15,000 plant varieties unique to the country – and yet industrial countries hold 97 per cent of all patents worldwide and are driving the rush to patent plant genetic resources.” 5 Today, the **genomics** revolution is **fueling** a **new wave of scientific research in the form of bioprospecting**, and it is impacting the lives of indigenous peoples around the world. Bioprospecting involves searching for, collecting, and deriving genetic materials from biodiversity samples that can be used in commercialized pharmaceutical, agricultural, industrial, or chemical processing end products.6 The **megadiversity** **countries** with 60-70 % of the world`s known biological diversity h**ave significant stake for harnessing the potential of biotechnology** and bioprospecting for achieving sustainable economic development.1 The Convention on Biological Diversity (CBD), the first international treaty provides opportunities to biodiversity rich countries to realize benefits arising out of the utilization of their bioresources. The CBD mentioned that national governments have authority to determine access to their genetic resources, and calls on governments to provide for conservation, sustainable use and equitable sharing of benefits from commercial use of those resources. Between 4 and 40 million biological species are still unknown in the world. New species are being discovered even today. In the last few decades, biotechnology has developed and played a vital role in the development of the agricultural, pharmaceutical and medical industries. As the importance of the biotechnology industry increases, many useful biotechnological inventions can earn their inventors millions of dollars. The real pirates are those developed countries, especially the US, who benefited and prospered from the plundering of natural resources from the developing and less developed countries without paying any royalty to the source countries at all. **Between 25-50 % of current prescription pharmaceuticals come from plants**, either directly or through modifications by biochemical methods, and the value of drugs to the U.S. pharmaceutical industry coming from plant species is estimated at over 30 billion USD per year.2 A multinational company or individual who wishes to develop a new product often makes use of the traditional knowledge of local people in deciding upon a plant, animal or other biological source to study. After the successful production of commercially useful products from those organisms, the company applies for a patent in its own name on those products. In most cases, the inventor not even acknowledges in his patent application that his product was derived from information provided by a local community. Biopiracy therefore can be described as the unjustified extraction of the environmental heritage and traditional knowledge from various regions of the earth for economic exploitation and industrial monopolization.7 Daniel F. Robinson distinguished between three different categories of biopiracy: “Patent-based biopiracy: The patenting of (often spurious) inventions based on biological resources and/or traditional knowledge that are extracted without adequate authorization and benefit-sharing from other (usually developing) countries, indigenous or local communities. Non-patent biopiracy: Other intellectual property control (through plant-variety protection or deceptive trademarks) based on biological resources and/or traditional knowledge that have been extracted without adequate authorization and benefit-sharing from other (usually developing) countries, indigenous or local communities. Misappropriation: The unauthorized extraction of biological resources and/or traditional knowledge from other (usually developing) countries, indigenous or local communities, without adequate benefit-sharing.” 8 2. 1. Global emergence of Biopiracy A recent report of United Nations Development Programme (UNDP) mentioned that “if unpaid royalty payments were being made to developing countries and indigenous peoples for the plant varieties and local knowledge used by multinational food and drug companies, those providers would earn approximately 5.4 billion USD per year”.2 Examples of countries not receiving their full share of these royalties include Tibet, India, Sri Lanka, South Africa, Samoa, Madagascar, Ecuador, Mexico and the Philippines. Since the 1980s, individual inventors or corporations in some countries, such as the United States, Japan, and some European countries, successfully lobbied government to permit exclusive rights to certain biological materials they developed through patenting. They were given exclusive rights to plant and/or reproduce and market them and have the right to prohibit others from planting, reproducing and selling the material provided. 2. 2. Biopiracy in India: few examples In the recent past, there have been several cases of biopiracy of traditional knowledge from India. First it was the patent on wound healing properties of haldi (turmeric).9 Curcuma longa, a type of turmeric, is an Indian herb that has been used as treatment for sprains, inflammatory conditions and wounds. The orange coloured root is native to the subcontinent and South East Asia, and for thousands of years has been a one of the major components of Ayurvedic medicine. In 1995, two US scientists from the University of Mississippi were granted US patent 5,401,504 on the use of turmeric. The scientists claimed that turmeric could heal wounds and claiming this to be novel. They have mentioned in their patent application that turmeric has long been used in India as a traditional medicine for treatment of various sprains and inflammatory conditions. But they claimed that there was no research on the use of turmeric as a healing agent for external wounds. The Indian government vigorously challenged the patent and provided numerous research papers predating the patent, proving that turmeric has long been used in India to heal wounds. As a result, the US Patent and Trademark office rejected all patent claims related to turmeric.10 The Neem tree case is another significant example of biopiracy of Indian medicinal plant. Azadirachtin is one of many active compounds present in bark, leaves, flowers and seeds of the Neem tree or Azadirachta indica. The remarkable properties of this compound have been utilized in India from ancient times in the form of extracts of various kinds produced by Indian farmers and small industrial firms in medicine and agriculture. Use of neem had been described in ancient Indian texts written over 2,000 years ago as an air purifier and effective medicine for almost all types of human and animal diseases because of its insect and pest repellant properties.9,10 A US timber importer studied the curing properties of neem and began importing neem seed to his company headquarter in Wisconsin since 1971. He successfully extracted a pesticidal agent from neem extract called Margosan-O. In 1985, the bio-pesticide derived from neem tree received clearance for the product from the US Environmental Protection Agency (EPA). The patent for the product was sold to the multinational chemical corporation, W.R. Grace after 3 years. Since then, many US and Japanese firms gained patents on formulae for stable neem-based solutions and emulsions and other products. The W.R.Grace approached several Indian manufacturers and industries to purchase their technology. The company ultimately managed to start a joint venture with a firm called P.J. Margo Pvt. Ltd to set up a plant in India. The plant processes up to 20 tonnes of seed a day and also established a network of neem seed suppliers in order to guarantee a constant supply of the seeds at a cheap price. In May 2000, a coalition of groups successfully overturned the patent held by the US company, WR Grace and the US Department of Agriculture over the Indian neem tree.10 Basmati is produced largely in Punjab, Western India and in Pakistan. Basmati rice has been one of the fastest growing export items from India in recent times. It is evident that Basmati has been grown for centuries in the subcontinent. After centuries of observation, experimentation and selection, the Indian farmers have developed numerous varieties of the rice to meet various ecological conditions, cooking needs and taste.9 On 2 September 1997, Texasbased RiceTec Inc. was granted patent number 5663484 for a new plant variety that is a cross between American long-grain rice and Basmati rice. RiceTec claimed that the new varieties have the same or better characteristics as the original Basmati rice and can be successfully grown in specified geographical areas in North America. The patent covers the genetic lines of the basmati and includes genes form the varieties developed by farmers. RiceTec has already been trading rice under brand names such as Kasmati, Texmati and Jasmati. RiceTec’s strain possesses the same qualities and characteristics of the Indian traditional varieties of Basmati. On the question of consumer deception, RiceTec clearly labels its product as ‘American type Basmati rice’.10 No case has been filed in the US so far by any interested party from the Indian subcontinent regarding this serious issue. By mid 2000, however, the Indian government decided to challenge some of the claims of the RiceTec patent. World’s largest importer of Basmati rice, Saudi Arabia and the UK, recognized that Basmati rice is unique to Northern India and Pakistan. Furthermore, the Agricultural and Processed Food Export Development Authority and Trade Mark Watch Agency of India have managed to win the Basmati patent case in at least 15 countries (including UK, Australia, France, Spain, Chile and the UAE). In the Basmati case, RiceTec’s action would really become a threat to the sales of Basmati rice from India, and could affect the economic conditions of the rice farmers in India. Karela (bitter gourd), Jamun (blackberry), Gumar and Brinjal, for instance, are commonly known in India for their anti diabetic characteristics. Their usees are so common in India that there is no novelty involved while using them for curbing diabetes. A patent was, however, obtained in the U.S. by three NRIs for their utilization as a cure for diabetes.11 North East India is very rich in flora especially in cultivation of medicinal plants by the tribes. Resource-rich Nagaland is plagued by bio-piracy with rare medicinal herbs, orchids and other endangered species being smuggled out of the state. These plants are being borne off by pharmaceutical companies for commercial benefits. Ginseng, taxus baccata and cephallu taxus and paris cordifolia have medicinal properties and are often smuggled to Myanmar.12 Some cases have been highlighted with a success story, but there are also numerous stories of deprivation in the context of biopiracy. Corporate patents usually do not recognize or compensate the indigenous people who are the main conservators of those resources. Indigenous communities, over the centuries, have identified and classified plants native to their lands and found their beneficial characteristics. But, the tribes do not have access to legal information that would protect their plants and cultural knowledge nor do they have the finances to obtain them.9 The profit incentive companies often overexploit the beneficial plant resources for commercial use, which ultimately result in the loss of forests and genetic material, crisis of land, plants and cultural knowledge of the indigenous communities. 2. 3. Biopiracy and food security The stealing of biological resources and indigenous knowledge would affect food security, livelihood of indigenous people, and consumers’ choice. More than 70 % of our food supply is dependent on a small number of edible plant resources, mainly wheat, maize, rice, and potato, which are fundamental to food security. Patenting of these plants varieties will definitely pose threat to the consumers. The patenting of biological technology will encourage monopoly control of plant material by Western transnational corporations. Farmers will become dependent of on corporations for their input in agriculture, i.e. seeds, fertilizers, pesticides and herbicides. It has particularly troubling implications for the developing world as the farmers cannot afford to buy seed each year and traditionally set aside a portion of their harvest to plant in the next growing season. Moreover, with the introduction of the genetically modified crops and high yielding varieties, the local crop varieties are being lost and outcompeted.13 The farmer’s rights to choose the desired crops have become difficult to implement. The technology can execute a devastating effect on the economy and food security of the farmers in developing world and can eventually destroy the locally adapted, inexpensive traditional crop varieties.14 The entire process will eventually lead to the monopolization of trade, which is ultimately against the principle of free trade fostered by the World Trade Organization (WTO). India’s agriculture being rich in bio-diversity has been always been an easy prey for big corporations engaging in agribusiness for the purpose of bio-piracy.15 Monsanto, for instance, tried to spread genetically modified brinjals in India in the form of Bt Brinjals in spite of the fact that India itself is a source of over 2500 different unique varieties of brinjals.16 Monsanto’s attempt of taking over the market was opposed by the public forcing the government to ban it for an indefinite period of time.16 But Monsanto is still stealing native crops, including brinjals, and quietly working on GM varieties of them in test fields, which is a clear violation of India's Biological Diversity Act 2002 (BDA). The farmer variety has been used by Monsanto in its breeding programs without taking prior permission from Indian farmers and without entering into any kind of benefit sharing agreement with them. This is not just grossly unethical; it is in violation of international agreements like the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources (ITPGR) which recognize the rights of the farming community over the genetic wealth used in agriculture.17

#### **R&D’s key to innovation – otherwise, future pandemics.**

Marjanovic et al. ’20 (Sonja; Ph.D. at the University of Cambridge; May 2020; “How to Best Enable Pharma Innovation Beyond the COVID-19 Crisis”; RAND; <https://www.rand.org/pubs/perspectives/PEA407-1.html>; Accessed: 8-31-2021; AU)

As key actors in the healthcare innovation landscape, pharmaceutical and life sciences companies have been called on to **develop** medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also **infectious diseases** that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a **bioterrorism context**.1 The general threat to public health that is posed by **antimicrobial resistance** is also well-recognised as an area **in need of pharmaceutical innovation**. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and competition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an **indispensable partner** in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceutical innovation in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is **essential** for socially responsible companies in the sector. 2 It is therefore unsurprising that we are seeing industry-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently **contributing in a variety of ways**. Examples include pharmaceutical companies donating existing compounds to assess their utility in the fight against COVID19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating trials//

for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accelerate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The **primary purpose** of such innovation is to benefit patients and wider population health. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be relatively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pressure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing combination product that is being tested for therapeutic potential against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider **how** pharmaceutical **innovation** for **responding to emerging** infectious diseases can best be enabled beyond the current crisis. Many **public health threats (including** those associated with other infectious diseases, bioterrorism agents and antimicrobial resistance) **are urgently in need** of pharmaceutical innovation, even if their impacts are not as visible to society as COVID-19 is in the immediate term. The pharmaceutical industry has responded to previous public health emergencies associated with infectious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contributions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still low.12 There are **important policy questions** as to whether – and how – industry could engage with such public health threats to an even greater extent under **improved innovation conditions.**

#### Evolving superbugs trigger extinction.

Srivatsa ’17 (Kadiyali; specialist in pediatric intensive and critical care medicine in the UK. Invented the bacterial identification tool ‘MAYA’; 1-12-2017; "Superbug Pandemics and How to Prevent Them", American Interest; https://www.the-american-interest.com/2017/01/12/superbug-pandemics-and-how-to-prevent-them/, Accessed: 8-31-2021; AU)

It is by now no secret that the human species is locked in a race of its own making with “superbugs.” Indeed, if popular science fiction is a measure of awareness, the theme has pervaded English-language literature from Michael Crichton’s 1969 Andromeda Strain all the way to Emily St. John Mandel’s 2014 Station Eleven and beyond. By a combination of massive inadvertence and what can only be called stupidity, we must now invent new and effective antibiotics faster than deadly bacteria evolve—and regrettably, they are rapidly doing so with our help. I do not exclude the possibility that bad actors might deliberately engineer deadly superbugs.1 But even if that does not happen, humanity faces an existential threat largely of its own making in the absence of malign intentions. As threats go, this one is entirely predictable. The concept of a “black swan,” Nassim Nicholas Taleb’s term for low-probability but high-impact events, has become widely known in recent years. Taleb did not invent the concept; he only gave it a catchy name to help mainly business executives who know little of statistics or probability. Many have embraced the “black swan” label the way children embrace holiday gifts, which are often bobbles of little value, except to them. But the threat of inadvertent pandemics is not a “black swan” because its probability is not low. If one likes catchy labels, it better fits the term “gray rhino,” which, explains Michele Wucker, is a high-probability, high-impact event that people manage to ignore anyway for a raft of social-psychological reasons.2 A pandemic is a quintessential gray rhino, for it is no longer a matter of if but of when it will challenge us—and of how prepared we are to deal with it when it happens. We have certainly been warned. The curse we have created was understood as a possibility from the very outset, when seventy years ago Sir Alexander Fleming, the discoverer of penicillin, predicted antibiotic resistance. When interviewed for a 2015 article, “The Most Predictable Disaster in the History of the Human Race,” Bill Gates pointed out that one of the costliest disasters of the 20th century, worse even than World War I, was the Spanish Flu pandemic of 1918-19. As the author of the article, Ezra Klein, put it: “No one can say we weren’t warned. And warned. And warned. A pandemic disease is the most predictable catastrophe in the history of the human race, if only because it has happened to the human race so many, many times before.”3 Even with effective new medicines, if we can devise them, we must contain outbreaks of bacterial disease fast, lest they get out of control. In other words, we have a social-organizational challenge before us as well as a strictly medical one. That means getting sufficient amounts of medicine into the right hands and in the right places, but it also means educating people and enabling them to communicate with each other to prevent any outbreak from spreading widely. Responsible governments and cooperative organizations have options in that regard, but even individuals can contribute something. To that end, as a medical doctor I have created a computer app that promises to be useful in that regard—of which more in a moment. But first let us review the situation, for while it has become well known to many people, there is a general resistance to acknowledging the severity and imminence of the danger. What Are the Problems? Bacteria are among the oldest living things on the planet. They are masters of survival and can be found everywhere. Billions of them live on and in every one of us, many of them helping our bodies to run smoothly and stay healthy. Most bacteria that are not helpful to us are at least harmless, but some are not. They invade our cells, spread quickly, and cause havoc that we refer to generically as disease. Millions of people used to die every year as a result of bacterial infections, until we developed antibiotics. These wonder drugs revolutionized medicine, but one can have too much of a good thing. Doctors have used antibiotics recklessly, prescribing them for just about everything, and in the process helped to create strains of bacteria that are resistant to the medicines//

we have. We even give antibiotics to cattle that are not sick and use them to fatten chickens. Companies large and small still mindlessly market antimicrobial products for hands and home, claiming that they kill bacteria and viruses. They do more harm than good because the low concentrations of antimicrobials that these products contain tend to kill friendly bacteria (not viruses at all), and so clear the way for the mass multiplication of surviving unfriendly bacteria. Perhaps even worse, hospitals have deployed antimicrobial products on an industrial scale for a long time now, the result being a sharp rise in iatrogenic bacterial illnesses. Overuse of antibiotics and commercial products containing them has helped superbugs to evolve. We now increasingly face microorganisms that cannot be killed by antibiotics, antifungals, antivirals, or any other chemical weapon we throw at them. Pandemics are the major risk we run as a result, but it is not the only one. Overuse of antibiotics by doctors, homemakers, and hospital managers could mean that, in the not-too-distant future, something as simple as a minor cut could again become life-threatening if it becomes infected. Few non-medical professionals are aware that antibiotics are the foundation on which nearly all of modern medicine rests. Cancer therapy, organ transplants, surgeries minor and major, and even childbirth all rely on antibiotics to prevent infections. If infections become untreatable we stand to lose most of the medical advances we have made over the past fifty years.