# 1NC Nano Nagle Round 6

## 1

**Interpretation – Affirmatives must defend a reduction in intellectual property protections that protect the medicines, not a condition surrounding it.**

**Medicines are physical substances**

**American Heritage Dictionary of Medicine 18** The American Heritage Dictionary of Medicine 2018 by Houghton Mifflin Harcourt Publishing Company<https://www.yourdictionary.com/medicine> //Elmer

"A substance, especially a drug, used to treat the signs and symptoms of a disease, condition, or injury."

**Data exclusivity protects clinical trial data, NOT MEDICINE. The plan doesn’t affect the actual production of medical substances, just the structural factors that influence it.**

**Thrasher 5-25** Rachel Thrasher 5-25-2021 "Chart of the Week: How Data Exclusivity Laws Impact Drug Prices"<https://www.bu.edu/gdp/2021/05/25/chart-of-the-week-how-data-exclusivity-laws-impact-drug-prices/> //sid

Data exclusivity is a form of intellectual property protection that applies specifically to data from pharmaceutical clinical trials. While innovator firms run their own clinical trials to gain marketing approval, generic manufacturers typically rely on the innovator’s clinical trials for the same approval. Data exclusivity rules keep generic firms from relying on that data for 5 to 12 years, depending on the specific law. Data exclusivity operates independently of patent protection and can block generic manufacturers from gaining marketing approval even if the patent has expired or the original pharmaceutical product does not qualify for patent protection. Although data exclusivity laws are matters of domestic legislation, the United States, the EU and others increasingly demand in their free trade agreement (FTA) negotiations that their trading partners protect clinical trial data in this way. Data exclusivity is just one of a host of “TRIPS-plus” treaty provisions designed to raise the overall level of intellectual property protection for innovator firms. Although the WTO’s Agreement on Trade-Related Intellectual Property Rights (TRIPS) does require Member states to protect clinical trial and other data from “unfair commercial use,” it does not require exclusivity rules that block the registration of generic products.

**Data exclusivity isn’t IP**

**Wilkinson 21** (Margaret Ann, Professor of Law at Western University, Canada, Director of the Area of Concentration in Intellectual Property, Information and Technology Law) \*\* TPM = Technological Property Management \*\* RMI = Rights Management Information Wilkinson, Margaret Ann. "Is protection of data through data exclusivity, technological protection measures or rights management information actually intellectual property?". In The Future of Intellectual Property, (Cheltenham, UK: Edward Elgar Publishing, 2021)doi:<https://doi.org/10.4337/9781800885349.00015> EE

In each of the international settings discussed above and shown in Table 9.1, data exclusivity, TPM and RMI are treated as IP in the sense of being placed in texts in an IP context. But can such placement define the nature of the contents? If the various protections so classified as IP within international instruments are found to differ in nature, is it appropriate or useful to try to sort them into subclasses of IP as either 'primary' IP or 'secondary' IP? Historically, the classic devices of patent and copyright have been brought together under the term 'intellectual property' through their similarity in being private monopo-lies created to encourage public dissemination of ideas:um might they thereforebe considered 'primary' and all those created afterwards, but which seem to be related to them, secondary?10` The definitions of 'secondary' posit some greater relationship than simply being 'earlier.' The Merriam Webster defi-nition of 'secondary' includes 'immediately derived from something original, primary or basie'iGs Similarly, the Oxford English Dictionarym definitions include one, tracing back to 1398, that begins with, 'Belonging to the second order in a series related by successive derivation, causation, or dependence; derived from, based on, or dependent on something else which is primary; not original, derivative. As the analyses above have shown, data exclusivity is not dependent upon the presence of patent nor does it take the form of an IP device, for, although it has a limited term, it does not create a monopoly market rather it censors the flow of information for the period of its existence. TPM and RM1, on the other hand, formally show more dependence on the existence of copyright (than data exclusivity does on patent) because their enactment invariably refers to 'works' and other vocabulary familiar in copyright — but, also invariably, TPM and RMI capture far more information than the subject matter of copyright. Like data exclusivity, neither 'PM nor RMI have limited terms. And, again like data exclusivity, TPM and RMI do not create monopoly markets — rather, between them, they shore up existing channels of distribution and make them effective beyond the copyright terms of whatever materials arc flowing (along with un-copyrighted materials and data) within them. All three appear inde-pendent of patent and copyright, rather than secondary to them.

**Standards:**

**1] Precision outweighs - anything outside the res is arbitrary and unpredictable because the topic determines prep, not being bound by it lets them jettison any word. Aff arguments are non-unique since a] it relies on semantics to convey those messages and b] pragmatics can be discussed anytime while we only have 2 months to discuss the wording of this unique topic**

**2] Allowing affs that relate to the factors and structures surrounding Medicines allows treatments, drug discovery techniques, computer programs, and production techniques that all have IP protections to be topical which eviscerate a stable locus of predictability creating stale and irreciprocal research burdens and expanding small school case lists**

**Fairness and education are voters--debate’s a game that needs rules to evaluate it and teaches portable skills we use lifelong. Drop the debater for deterrence--the whole round was skewed. No rvi--a] baiting--they’d use aff infinite prep to be abusive and just frontline it well then win b] chilling--scares us from checking infinite abuse because you could just sit on the rvi. Competing interps--reasonability is arbitrary and causes a race to the bottom--competing interps creates the best norms but limited words in the res mean limited interps so no race to the top. Neg theory first--NC abuse was reactive so they were the root cause and only 2 months for topic specific shells while we can norm their’s anytime. 1AR theory and independent voters are bad since a] you get 2ar ethos to blow up a 20 second shell b] we’re forced to overcover to match the 3 minute 2ar c] responses will be new in the 2ar so it’s irresolvable. No infinite abuse--a] NC only has a finite amount of time b] pre-empts solve c] it’s a bad way to check infinite abuse. Drop the arg and reasonability to check their 2ar spin advantage--we don’t have a 3nr so small arg’s can easily get blown up.**

## 2

**The WTO and neoliberalism are inherently intertwined – trade agreements are written and passed by large capitalist power players who serve their own interests**

**Fukuda 10** [Fukuda, Yasuo. "WTO regime as a new stage of imperialism: Decaying capitalism and its alternative." World Review of Political Economy 1.3 (2010): 485. //MSJ SB]

The objectives of the World Trade Organization (WTO) regime are to liberalize trade in goods and services and force developing countries to introduce neo-liberal policies. The purpose is to advance deregulation, privatization, and free trade. T. Friedman (2006) characterized globalization after 2000 as the world becoming flat, whereby every company, organization, or individual can gain entry into a global marketplace, and where all people are free to start businesses which may benefit from a worldwide commercial network. However, this is just one side of globalization under the WTO regime. Multinational corporations as monopoly capital reap most of the benefits of the “flat” world economy. WTO Agreements have ushered in a new era of corporate globalization. The aim of this article is to show that corporate globalization represents a new stage of imperialism, whereby monopoly capital not only controls the world market, but writes the market rules as well. This new form of imperialism is nothing less than a decaying stage of capitalism in which, quite apart from people being guaranteed the chance to lead happy and stable lives, the very potential for doing so is undermined and destroyed. Finally, principles of localization are presented as an alternative to corporate globalization.Looking at contemporary capitalism from the viewpoint of Lenin’s “Imperialism,” it is clear that four of the five pillars (excepting the fifth) are still applicable to capitalism under the WTO regime. First, a small number of multinational corporations typically control more than half the market-share of major industries. For example, in the commercial seed market, the world’s top three corporations (Monsanto, DuPont, and Syngenta of Switzerland) control almost half of the world market. Cargill, along with its top four competitors, handle 85 percent of world grain trade. In the pharmaceutical industry, the top ten corporations hold a combined 54.8 percent share of the world market (ETC Group 2008). In banking, the world’s top 45 banks account for nearly 40 percent of the gross tier 1 capital of the top 1,000, and about 45 percent of the total assets (The Banker, June 24, 2009). It hardly needs saying that these companies enhance their power considerably through close relationships with governments, and through political contributions, lobbying, revolving doors, and the like. Second, industrial and financial monopoly capital establish political action groups as a means to advance common political goals. The negotiation of the General Agreement on Trade in Services (GATS) represents a typical example of this sort of collusion between major companies of both the industrial and financial spheres. Third, no monopoly capital can survive without strategic foreign investment, including direct as well as portfolio investment. For instance, automobile companies will not survive without gaining access to Chinese and Indian markets. Fourth, in the course of intense competition over dominant market shares, large multinational corporations often collude to form price cartels (Connor 2001; Levenstein and Suslow 2001). The cartel-based character of monopoly capital culminated during GATT Uruguay Round negotiations, as large businesses cooperated to set market-rules specifically tailored to their own ends. Second, monopoly capital now dictates the rules of trade by directly involving itself in the crafting of trade policy. Big business coalitions took part in drafting the WTO Agreements. In the case of GATS, multinational corporations, including Citigroup, J. P. Morgan Chase, and Barclays Bank, drafted the proposal under the authorization of US and EU governments, and then used lobbying to push the agreement through at the time of negotiations (Balanyá et al. 2003). In the case of the negotiations for the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), it was the US Intellectual Property Committee (USIPC), a US business group, which wrote the initial draft, at the request of the US Trade Representative (Weissman 1996). Those party to the USIPC include Monsanto, Pfizer, DuPont, and IBM. Market and trade rules amount to a form of infrastructure vis-à-vis the markets. The body which decides the rules of trade has a considerable advantage over other stakeholders. Under the current setting, it is large multinationals, especially the agents of US monopoly capital, which control the rules of trade, specifically through cozy relationships with the US government. Therefore, it is the governance of trade rules which most distinguishes modern capitalism from the imperialist systems of the early 20th century. Thus, the WTO regime is nothing short of a regime of imperialism, whereby monopoly capital exercises governing power over both national markets and the world economy. Whereas the first four of the five pillars by which Lenin defined imperialism still apply under the WTO regime, in place of the fifth (colonization), monopoly capital has gained new tools of dominance, most specifically the ability to design market rules. In losing the policy space to protect and develop local firms, developing countries are obliged to become incorporated into a global network managed by monopoly capital. In this way, income is steadily transferred from the lower rungs of the global economy to monopoly capital at the top. In short, the WTO regime constitutes a new stage of imperialism, in which monopoly capital holds hegemony over market rules in place of colonization. The WTO regime was devised under the initiatives of monopoly capital as a means to promote corporate globalization. The next task is to explore what corporate globalization has brought to society. The true nature of corporate globalization is expressed in its outcomes. Lenin characterized imperialism as a decaying stage of capitalism, owing to its unproductive character, which he described as rentier capitalism. The aim of this section is to show that corporate globalization too is nothing more than a decaying stage of capitalism. The IMF and the World Bank have occupied a central role in bringing developing countries into the fold of corporate globalization. Since the 1980s, under the IMF’s Structural Adjustment Program (SAP), more than 100 developing countries have been forced to adopt “open door” policies with respect to investment and trade (Chossudovsky 1997, 1998). Once the door has been pried open, large multinational firms—for instance, the major players of agribusiness and infra-business—are quick to extend their reach into the newly available markets. As a result, considerable damage results to the people of developing countries through, for example, loss of traditional industries like family farming and the privatization of hitherto public resources such as community water supplies. After the 1997 East Asian financial crisis, the IMF met with severe criticism for imposing neo-liberal based readjustment regimes on the afflicted countries. Nevertheless, the IMF has continued to adhere to a neo-liberal approach with respect to the global recession which is currently underway following the collapse of the housing bubble in 2008 (Weisbrot et al. 2009). The IMF’s Structural Adjustment Program was formulated as global rules by WTO agreements. Thus, neo-liberalism has become the predominant feature with respect to international rules on trade. Liberalization of trade policy amounts to nothing but the loss on the part of national governments of the policy space to govern. Developing countries need flexible tariff systems, quantitative import controls, and capital controls to protect their local industries. They also need policies such as local content controls and export subsidies to foster new economic development. WTO agreements prohibit or strictly limit the use of these industrial policies, in spite of the fact that these very same policies were employed to great effect by developed countries during their earlier stages of development. Deprived of this policy space, developing countries are easily brought under the governance of monopoly capital

**Their rhetoric of helping developing economies is the Trojan Horse for neoliberal privatization which destroys healthcare and is a vehicle for imperialism.**

**Gatwiri et al 19** [(Kathomi Gatwiri, lecturer based at Southern Cross University where she teaches Social Work & Social Policy; Julians Amboko, finance and economics correspondent with the Nation Media Group; and Darius Okolla, Bachelor of Commerce - Finance degree, from Kenyatta University) “The implications of Neoliberalism on African economies, health outcomes and wellbeing: a conceptual argument” Soc Theory Health. 18(1): 86–101. 6-26-19, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7223727/>] TDI

Since the late 1980s, the sub-Sahara has been struggling to address the issues of inequality that have been inflated by neoliberal policies and capitalist development policies that focus on production of labour and little on the health and wellbeing of the “producers” of the said labour. Globally, the rolling out of neoliberal policies has led to a plethora of harmful socioeconomic consequences, including increased poverty, unemployment, and deterioration of income distribution (Rotarou and Sakellariou 2017; Collins et al. 2015). Hartmann (2016, p. 2145) states that “neoliberalism typically refers to minimal government intervention, laissez-faire market policies, and individualism over collectivism [which] has been adopted by—and pressed upon—the majority of national governments and global development institution.” She further states that “neoliberal policies have contributed to the privatization and individualization of healthcare, resulting in growing health inequalities.” By privatising healthcare, education, electricity, water and housing, neoliberals argue that private institutions are more capable, effective and efficient in providing social services. Harvey (2007) states that neoliberalism is “a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, … free trade” and a “hands-off” approach from the government. This is what Friedman referred to as the system of “free market capitalism” (Friedman 2009). However, (Garnham (2017) argues that decreasing public spending and government involvement in the welfare of people through the rhetoric of choice and freedom has a harmful impact on people’s health and wellbeing. The biggest conceptual challenge is that neoliberal ideology adopts the language of freedom and choice, increased foreign investments, and open markets and trade to progress policies that lead to privatisation of basic needs such as education, healthcare, water, electricity and housing. The rich can often afford these services and can compete “fairly” in the “free market”, but the poor—unable to afford health care, education or decent housing—are left marginalised. Njoya (2017) explored the use of language in promoting inequality in the healthcare system. She argued that “neoliberalism uses the language of social policy and justice but [insidiously] drives a very corporate and unequal agenda.” Neoliberalism has radically shifted the African public health space in the last two decades. Most sub-Saharan African countries drastically reduced their healthcare budgets following the International Monetary Fund (IMF) and the World Bank Structural Adjustment programs (SAPs) directives. As Hartmann (2016, p. 2146) wrote, it “decentralized health care decision-making and funding, resulting in wide-scale privatization of health care services, delivery, and insurance, which led to structural segmentation and fragmentation.” SAPs have had myriad negative impacts on African economies, including, but not limited to, “inflationary pressures, the marginalization of the poor in the distribution of educational and health benefits and a reduction in employment” (Rono 2002, p. 84). As the main impetus of the SAPs was to reduce and ration expenditure, structural adjustment in the healthcare sector slashed public spending on primary healthcare, and aided the privatisation of health systems and services. In Kenya, for example, The Bamako Initiative of 1987 anchored cost-sharing as a central tenet of public health policy, in which patients were required to pay for nearly all costs of diagnosis and treatment (Rono 2002). Outside of an emergency, patients were required to provide proof of payment before medical services are availed. By channelling funding to narrow medical interests, structural adjustment policies resulted in an uneven medical landscape, with a few prestigious fields surrounded by poorly resourced departments. Clinicians had to tailor their decisions about treatment to the limited medicine, technologies and resources available. The increased number of private healthcare organisations, coupled with a significant reduction in the role of government in the provision of healthcare services, contributed to extensive negative outcomes on the quality, effectiveness, cost and access of health systems and services, which severely impacted on people’s wellbeing. Rotarou and Sakellariou (2017, p. 497) state that the private institutions, “with their focus on increasing profits, and not on providing affordable and good-quality healthcare, have led to the deterioration of public health systems, increase in urban–rural divide, as well as increase in inequality of access to healthcare services.” Privatisation of healthcare has made services more unaffordable and less available to the population of people that need it the most. As a result, life expectancy has stagnated or fallen in most African countries, and mortality from preventable infections and diseases continues to rise. Further to this, the politics of healthcare through a neoliberal lens are often framed as “individual” issues rather than “structural and ideological” issues. This implies that the neoliberal approach to health has diminished the idea of healthcare as a universal human right. Reframing, reshaping, rethinking and re-politicising healthcare reveals the colonial attitudes that dictate who “deserves” good healthcare. Njoya (2017) states, [Politicians in Kenya] come to the rescue of the poor by paying hospital bills but will not have a conversation about the fact that we the taxpayers are paying millions [worth of] medical cover for each of them and will not engage in a conversation about the underfunding of healthcare, and the looting of the little money given to healthcare. When [the] Netherlands and the UN are helping foreign companies purchase Kenyan hospitals, [they are] supporting our government’s deafness to [our right to basic healthcare] and [promoting their] refusal to fund public hospitals. The privatisation and buying out of African hospitals by foreign companies in an attempt to “help and rescue them” is a capitalist response that undercuts universal healthcare for Africans by appropriating the language of care and inclusion. In reality, this “white saviour approach” is layered with nothing but racism, disempowerment, exploitation of people, and exclusion of those who cannot afford those “privatised” services. Access to health services, therefore, remains both a political as well as a human rights issue that’s closely tied to social justice (Braveman and Gruskin 2003b); but Africa’s colonial history, fuelled by Western greed for her resources, promotes discriminatory policies that continue to impact Africans and their wellbeing.

**Neoliberal exploitation causes extinction but responses are biased**

**Guerin 19** (Fred – philosophy professor at Vancouver Island University, “We Must End Neoliberalism, or Neoliberalism Will End Us,” 11 August 2019, https://truthout.org/articles/we-must-end-neoliberalism-or-neoliberalism-will-end-us/)

It is this uncomfortable truth that inevitably raises the question: Why has neoliberalism succeeded so well? The answer is unsettling precisely because it implicates all of us — at least all of us who live in industrial capitalist countries. Even if we are not equally blameworthy in creating such a monstrous ideology, we have all, in some measure, been co-opted into accepting neoliberal capitalism’s false premises and promises. It is quite true that domestic and international economic and political structures that legitimize neoliberal capitalism are oriented by, and in the interest of, an elite corporate class. Yet in the wake of the [2007-200](https://en.wikipedia.org/wiki/Financial_crisis_of_2007%E2%80%932008)[8 financial crisis](https://www.history.com/topics/21st-century/recession) — the worst economic crash since 1929 — there has been no massive global uprising or any sustained call for radical institutional reform (with the exception of the short-lived grassroots [Occupy Wall Street](https://occupywallst.org/about/) movement, and to some extent, France’s [Yellow Vests](https://www.npr.org/2018/12/03/672862353/who-are-frances-yellow-vest-protesters-and-what-do-they-want) movement). Continuous rebellion and dissent leading to revolution has not happened because we appear to have tacitly bought into an ideology that ensures our own powerlessness to transform ourselves or our societies. The good news is that this is changing. In the last few years, many have become conscious of the fact that civilizational collapse as a consequence of human-caused climate disruption is directly attributable to an economic and political system that views the Earth and everything that lives on it as an inexhaustible means for individual and corporate profit. For the first time in human history, we are confronted by the near certainty of global ecological catastrophe and its resulting political and economic breakdown — not as a consequence of natural causes, nor the vengeful act of a deity, but as a result of deliberate human choice. The brutal reality is that the present world of neoliberal economics and politics simply could not have survived had we not gradually acquiesced to it. So how did this happen? The Beginnings of Neoliberal Thought Let’s begin with the following truism: When compared to more brutalizing regimes of dominance and militaristic authoritarianism throughout history, we do have a greater measure of freedom today. With the emergence of liberal social rights and the United Nations recognition and validation of international human rights after the horrors of two world wars, the corporate power elite and the governments that do their bidding implicitly understood that there would no longer be any toleration for political ideologies whose goal was to brutally repress human beings. So, the question for the latter was always how to ensure that the right class continued to be in a position of control and dominance, while at least providing the appearance of freedom and democracy for everyone else. First, what is required is the semblance of choice and economic power — an ersatz form of freedom realized through the mythical “self-organizing” and “self-correcting” “free market.” Free-market laissez-faire monopoly capitalism is expressly designed to counter any attempts by government to impose regulations on behalf of the public good that might impede profit, and to redefine citizens wholly as consumers. Human well-being is thereby reduced to a purely economic index. Secondly, what is required is the semblance of democracy by way of electoral representative politics organized and paid for by moneyed interests. Lastly, what is required is the semblance of liberal institutional arrangements (education, social security, health care, policing, environmental and labor regulatory bodies) that increasingly do not serve public interest, but protect and serve private profit and business interests. In conjunction with ersatz freedom of choice, democracy and the semblance of public institutions which appear to further or protect the public good, there is also what Havel might have called the semblance of liberal dissidence — those persons, regulatory bodies and political parties who make a pretense of fighting on behalf of the public good and in favor of health, labor and environmental rights, while continuing to forward a corporate rights agenda behind the backs of citizens. In the contemporary world, the corporate capitalist class and the neoliberal governments that do their bidding have been able to maintain the upper hand not through sheer force or brutality, but because they have gradually been allowed to corrode democratic institutions and eviscerate the commons and, therefore, any sense of mutual obligation and responsibility humans have toward each other. Neoliberalism and Instrumental Reasoning It is crucial to recognize here that modern capitalism from the 19th century emerged in tandem with a particular sort of instrumental reasoning — the sort of use-oriented reasoning that seems innocuous and practical because it enables us to “get things done.” When we want to realize a particular end — say, build a house or mend a fence, we reason in an instrumental fashion — that is, we calculate what we need to do in order to successfully realize an end or achieve a goal. Instrumental reasoning does not tell us why we value ideas such as justice, love, courage, or why we care about other human beings, other animals or the planet. It is not about understanding or valuing the world, but always about how to succeed at realizing a goal in the most orderly and efficient way. Modern bureaucracies and the administrative state are founded on instrumental rationality. However, when divorced from deeper human concerns about social and environmental justice, instrumental reasoning can become dehumanizing, hegemonic and, indeed, life-annihilating. Imperialist bureaucracies and Nazi death camps were grounded in a form of instrumental reasoning detached from any sort of deeper value-oriented rationality that might speak to notions of human rights or dignity. The goal of genocide was enacted through Nazi bureaucracy and enabled by instrumental reasoning that was orderly, precise, lawful and lethal. In the context of contemporary neoliberal capitalism, instrumental reasoning plays a pivotal enabling and legitimating role. If my end or goal is wealth or profit, then any means that will help me efficiently achieve this end is “rationally” acceptable, and even laudable. When this sort of instrumental reasoning is married to a capitalist theory of human nature that views human beings as egotistic, competitive self-maximizers, and a neoliberal theory of economics and politics based on imperialism, technical control and domination of the planet, it must inevitably displace any sort of deeper value questions about the quality of life, the well-being of human communities and health of the biosphere. From an instrumental reasoning perspective, we as a society have bought into the seductive discourses and practices of neoliberal capitalism by embracing the myths of individual consumer freedom and self-empowering entrepreneurship. The exercise of virtues that enable us to flourish as communities and nations are all jettisoned when instrumental reasoning and neoliberal capitalism become hegemonic. Even when we appear at times to resist the logic of unjust outcomes that goes with neoliberalism, or question its theoretical or moral legitimacy, the fact remains that our politics, mainstream newspapers and electronic media, schools of economics and institutional arrangements, have been infiltrated, disciplined and systemically reframed by neoliberal doctrine, and legitimated through utilitarian calculation and instrumental reasoning. Indeed, even the false mantra that “there is no viable alternative to capitalism” pervades modern thinking to such a degree that a wholly different kind of economics and politics has often seemed unthinkable to many. There is no need for brute force nor even overt forms of propaganda in such a world because the central presuppositions of neoliberalism have been normalized and mainstreamed in everyday society. Moreover, transnational corporate class interests are protected by private security and public police forces; they are fortified and universalized by international bodies, such as the International Monetary Fund and World Bank, corporate lobby groups, Chambers of Commerce, Business Councils and roundtables, neoconservative think tanks, corporate super PACs and nonprofit corporate front groups such as the American Legislative Exchange Council that draft legislation in the interests of corporations, and against environmental regulations, corporate taxation and labor rights. Given all of the above, any talk of revolution or even the notion of mass citizen uprising resistance or rebellion might seem to be nothing less than delusional. That is, until now. Neoliberalism Versus the Climate If there is one thing that history has made clear to us again and again, it is that no human construction is eternal, all-pervasive or invulnerable to change. Reality has a way of disrupting the status quo, messing up well-laid plans and invalidating conventional pieties. In the last 20 years, reality has asserted itself in a way unprecedented in human history. For the first time, we are imminently threatened as a species because we have chosen an economic and political system that treats the planet as if it were no more than a means for infinite exploitation and individual wealth, rather than a limited Earth that only conditionally provides the possibility for all forms of life. In an unprecedented way, what has come into focus today is both the limiting nature of instrumental reasoning and the life-destroying impact of neoliberal capitalism to which it is wedded. Climate disruption as a consequence of human-caused planetary warming has brought into sharp focus two stark and undeniable truths: For the first time in human history, we have put more than a million different species at risk of extinction including our own. The economic system of capitalism and its most recent neoliberal configuration is the principal cause of the present climate crisis that threatens human and other species’ survival. The growing recognition of the above truths has pressed us to finally ask deeper questions about what we really value: the quality of life, the well-being of human and other forms of life, the health of our communities and food systems, and the safety and dignity of persons in the context of massive climate disruption. For the first time, we are asking how is it that we have come to accept the kind of instrumental rationality and neoliberal economic and political system that not only dehumanizes us as individuals but will inevitably destroy life as we know it. Those who financially benefit from the system of neoliberal capitalism would have us believe that we cannot change or transform the world into a better, more equal, more caring, environmentally sustainable and responsible place. But the fact is there are individuals and groups emerging and multiplying around the world whose actions demonstrate the neoliberal capitalist worldview is no longer viable. They are doing unprecedented things: putting forth Green New Deals that forward new ways of thinking and doing economics and politics; investing in and building environmentally sustainable alternative energy systems and modes of transportation and agriculture; demanding food sovereignty; and promoting local forms of banking, governance and sustainable living. What has become apparent to the rapidly growing numbers who are building alternative ways of living is that capitalism must end. Historically, critiques of capitalism focused on worker alienation and exploitation, imperialism, profound disparities of wealth, market instability and the erosion of democracy. However, all of the latter pale in comparison to the critique of capital based on the very foreseeable potential it has to completely destroy the very conditions of possibility for life itself.

**The alt is to decentralize global trade. A pluralistic global system allows for flexible industrial development while avoiding the pitfalls of centralized neoliberalism.**

**Bello 99** [(Walden, Filipino academic, environmentalist, and social worker who served as a member of the House of Representatives of the Philippines.) “Why Reform of the WTO is the Wrong Agenda” Focus on Trade, No. 43, December 1999, <https://www.tni.org/my/node/6851>] TDI

Building a More Pluralistic System of International Trade Governance

If there is one thing that is clear, it is that developing country governments and international civil society must not allow their energies to be hijacked into reforming these institutions. This will only amount to administering a facelift to fundamentally flawed institutions. Indeed, today's need is not another centralized global institution, reformed or unreformed, but the deconcentration and decentralization of institutional power and the creation of a pluralistic system of institutions and organizations interacting with one another amidst broadly defined and flexible agreements and understandings. It was under such a more pluralistic global system, where hegemonic power was still far form institutionalized in a set of all encompassing and powerful multilateral organizations that the Latin American countries and many Asian countries were able to achieve a modicum of industrial development in the period from 1950-70. It was under a more pluralistic world system, under a GATT that was limited in its power, flexible, and more sympathetic to the special status of developing countries, that the East and Southeast Asian countries were able to become newly industrializing countries through activist state trade and industrial policies that departed significantly from the free-market biases enshrined in the WTO. The alternative to a powerful WTO is not a Hobbesian state of nature. It is always the powerful that have stoked this fear. The reality of international economic relations in a world marked by a multiplicity of international and regional institutions that check one another is a far cry from the propaganda image of a 'nasty' and 'brutish' world. Of course, the threat of unilateral action by the powerful is ever present in such a system, but it is one that even the powerful hesitate to take for fear of its consequences on their legitimacy as well as the reaction it would provoke in the form of opposing coalitions. In other words, what developing countries and international civil society should aim at is not to reform the WTO but, through a combination of passive and active measures, to radically reduce its power and to make it simply another international insitution coexisting with and being checked by other international organizations, agreements, and regional groupings. These would include such diverse actors and institutions as UNCTAD, multilateral environmental agreements, the International Labor Organization (ILO), evolving trde blocs such as Mercosur in Latin America, SAARC in South Asia, SADCC in Southern Africa, and ASEAN in Southeast Asia. It is in such a more fluid, less structured, more pluralistic world with multiple checks and balances that the nations and communities of the South will be able to carve out the space to develop based on their values, their rhythms, and the strategies of their choice.

**Try-or-die—collapse of neolib is inevitable but alternative leftist visions are necessary to counter reactionary right populism**

**Galant 19** [(Michael, coordinator of the Wire Pillar of the Progressive International) “The Battle of Seattle: 20 years later, it's time for a revival” Open Democracy, 11-30-19, <https://www.opendemocracy.net/en/oureconomy/battle-seattle-20-years-later-its-time-revival/>] TDI

Globalization and its dissent

Neoliberal globalization is a political project intended to raise the power of capital to the international level – to cement its supremacy as an immutable universal law beyond the reach of political communities. “Free trade” agreements and WTO rules establish the primacy of profit over democracy, labor, environmental, and consumer protections. World Bank and IMF loan conditions impose austerity, privatization, and deregulation on nations of the Global South. An international system of tax havens allows corporations and wealthy individuals to hoard their plundered resources. Global supply chain fragmentation shields multinationals from accountability for their abuses. Investment treaties unleash finance and corporations to cross borders in search of opportunities for exploitation, setting off a regulatory race to the bottom. If there was doubt before that capitalism must be confronted at the global level to be defeated, the power grab that is neoliberal globalization puts those doubts to rest. Capital is global. Labor must be too. Yet there are forces preventing such global solidarity. Beginning during the Cold War, the majority of Northern labor accepted a compromise: support a foreign policy that enacts the interests of capital, and benefit from a share of the spoils in the form of minor concessions, a tempered welfare state, and cheap consumer goods. This tacit agreement survived largely intact into the neoliberal era – dividing the interests of a global working class and quelling demands for systemic global change. The Alter-Globalization Movement rejected the compromise. While activists in the Global South had long resisted destructive free trade agreements and World Bank austerity, occasionally with solidarity from the North, the extremity of turn-of-the-century neoliberalism led to the explosion of a movement that refused to accept the mere crumbs of neocolonial extraction, and sought instead to build an alternative global economy for the many, both North and South. This was a movement that brought together American anarchists with Korean peasants; libertarian socialist indigenous groups in Mexico with US anti-sweatshop activists; the International Confederation of Free Trade Unions with the Industrial Workers of the World; the Brazilian Movement for Landless Workers with Greenpeace; Filipino anti-capitalist scholars with French farmer activists best known for physically dismantling a McDonald’s. Their demands were many and varied – from land redistribution to the abolition of the World Bank, from a renegotiated NAFTA to the protection of indigenous knowledge of seeds from privatization – but all shared a vision of a global solidarity that would overcome the forces of neoliberal globalization. Organizing under such a big tent, the AGM is better understood as a dispersed, informal network – a “movement of movements” – than a unified political structure. This fluid network manifested in many forms. The flagship World Social Forum regularly convened activists in an alternative to the annual World Economic Forum. Transnational advocacy networks campaigned on issues such as Global South debt relief. Northern activists used their positions of relative privilege to support local campaigns in the South, fighting water privatization in Bolivia and indigenous displacement from hydroelectric dams in India. And, as in Seattle, meetings of international organizations became rallying points for major global demonstrations. With these organizing methods, the movement achieved substantial victories. The Jubilee 2000 campaign led to significant debt relief for Southern nations. Potentially disastrous trade agreements from the FTAA to TPP have been, at least temporarily, defeated. International Financial Institutions like the IMF and World Bank – while still agents of global capital – have vastly improved their lending practices since the 90’s. But its greatest successes were intangible: the AGM undermined the hegemonic ambitions embodied in Thatcher’s “There Is No Alternative”, slowed neoliberal globalization’s seemingly inexorable onslaught, and kept alive the flame of resistance during an otherwise nadir of Leftist politics. The AGM should not, however, be romanticized. Emerging in a moment when the failures of 20th century socialist politics weighed heavily on the Left’s imagination, the AGM turned too far in the opposing direction. Big-tentism led to a dilution of demands and paved the way for the NGO-ization of the World Social Fora. A preference for all things decentralized made grabbing headlines easy, but building lasting political structures difficult. Resistance was often treated as an intrinsically valuable ends, rather than a means to taking power. And criticisms of “neoliberalism” typically fell short of identifying the true enemy – capitalism – or advancing a coherent alternative – socialism. Ultimately, the neoliberal plan for the global economy succeeded more than not. While resistance to neoliberal globalization would rage on in the South, Northern solidarity faded. The September 11th attacks were the beginning of the end. Energy shifted to the anti-war movement, the state expanded its repression of Leftist organizing, and increased pressures toward “patriotism” led some to reconsider the old foreign policy compromise. By the mid-2000’s, little was left of what the AGM once was. A call for revival It’s time to rekindle the flame. The global economy is still structured in the interest of capital. But the neoliberal consensus has begun to waver under the weight of its own contradictions. The Right has a response to the crisis. Reactionary nationalists like Trump and Johnson seize upon existing systems of oppression to scapegoat the symptoms of a failed economic model. The problem is not that the global working class has lost out to a global capital class. The problem is that “we” – White, Christian, cishet, native-born Americans – have lost out to “them” – People of Color, immigrants, entire foreign countries, feminists, LGBTQ+ folks, and all those who threaten our supremacy in their struggles for liberation. The Left must offer an alternative vision. The dramatic growth of socialist organizing and rise in popularity of social democratic politicians should offer great hope. But as the AGM understood, social democracy for the North is not enough. Our socialism must not mean merely a greater share of neocolonial extraction for Northern workers. Our socialism must rightly identify the global nature of our challenge, and unite across borders to confront a globalized capital. That means internationalizing labor organizing to confront multinational corporations. Changing the rules of trade and investment. Ending tax havens. Building alternatives to the existing intellectual property regime. Holding corporations accountable for abuses in their supply chains. Supporting the struggles of peasants, indigenous peoples, and all global subaltern groups. Democratizing global governance. Opening borders to those displaced by the ravages of global capitalism. Advancing alternative models of development. Transforming, if not abolishing and replacing, the Bretton Woods Institutions. And confronting the all-important threat of climate collapse with, to begin with, a global Green New Deal. These are not minor addendums to a socialist platform. Class war is global. Internationalist demands are fundamental. Organizations that remain from the AGM, international labor, and newcomers like Justice Is Global, the Fight Inequality Alliance, and Bernie Sanders and Yanis Varoufakis’s Progressive International, are already struggling for this vision. But its fruition depends on the backing of a far broader movement. Like the AGM, we must take a global frame of analysis, and see neoliberal globalization as a concerted effort to undermine our power. Unlike the AGM, we must understand that neoliberalism is merely one manifestation of a greater enemy. Like the AGM, we must build diverse, anti-racist, anti-sexist, anti-xenophobic movements that transcend borders. Unlike the AGM, we must not allow fears of centralization to undermine a coherent platform. Like the AGM, we must reject a class compromise that sacrifices the possibility of a better world for the crumbs of colonialism. Unlike the AGM, we must build lasting political structures that back our rejection with political power. 20 years ago, the streets of Seattle echoed with a chant that would become the defining motto of the movement: “another world is possible!” It still is – if we’re willing to fight for it.

## 3

**CP: A nation appointed international panel of scientists including National Academies and corresponding organizations should reduce intellectual property protections for medicines by significantly reducing data exclusivity and manage similar conflicts of interest as per Hajjar and Greenbaum**

**International panel of science diplomats can rule over IP---that’s key to science diplomacy.**

**Hajjar and Greenbaum 18** [David; Dean Emeritus and University Distinguished Professor, and Professor of Biochemistry and Pathology at Weill Cornell Medicine, Cornell University. He is a Fellow of the American Academy of Arts and Sciences, Fellow of the American Association for the Advancement of Sciences, a Jefferson Science Fellow of the National Academies at the U.S. Department of State, and a recent Senior Fellow in Science Policy at the Brookings Institute; Steven; Professor and Chair of the Department of Physics and Astronomy at Hunter College of the City University of New York and a Fellow of the American Physical Society. He was a Jefferson Science Fellow of the National Academies at the U.S. Department of State; “Leveraging Diplomacy for Managing Scientific Challenges,” American Diplomacy; September 18;<https://americandiplomacy.web.unc.edu/2018/09/leveraging-diplomacy-for-managing-scientific-challenges-an-opportunity-to-navigate-the-future-of-science/>] Justin

At the global level, science diplomacy is defined as cooperation among countries in order to solve complex problems through scientific research and education (1). For example, science diplomacy plays an important role in resolving global issues related to the ecosystem (such as clean water, food safety, energy conservation, and preservation of the environment). It also addresses problems related to the healthcare industry. For example, scientists have served at the international level to forge the Middle Eastern Cancer Consortium a decade ago to facilitate better healthcare and improve cancer research in the region. Whether one considers science for diplomacy or diplomacy for science, international science collaborations benefit from allowing science diplomats (broadly defined as science envoys, science attaches, embassy fellows) to help establish positive international relationships between the U.S., Europe, Latin America, Africa or Asia, particularly when proprietary disputes arise (2, 3). These various types of science diplomats already exist; some, like embassy fellows and science envoys, have one-year appointments so their role may be limited, while attaches usually have two or three year appointments that may allow them to be more successful in long, protracted negotiations. In any event, we believe that scientists can play more of a role in advancing international scientific cooperation. A key point addressed here is how to balance security concerns against the need for free exchange of information needed for innovation and growth. Both the National Science Foundation and the National Institutes of Health are already engaged in supporting American science and strengthening collaborations abroad. Such efforts take advantage of international expertise, facilities, and equipment. Here, we provide a rationale for the use of diplomacy to address scientific challenges. This approach allows some scientists working as diplomats to help manage complex and potentially conflicting situations that arise between scientific communities and their governments. Such issues include managing disputes such as licensing agreements for intellectual property (IP) and providing protection of IP. International collaborations can not only support but also accelerate the advancement of science. However, collaborations may carry risk if IP is misappropriated for other purposes. International collaborations should have a basis in strategy and specific goals (for example, drug discovery) in order to justify the use of government and/or corporate funds. About a decade ago, a group of academics from the University of Manchester in the United Kingdom assembled the “Manchester Manifesto,” subtitled “Who Owns Science” (6). This document addressed the lack of alignment between commercial interests, intellectual rights, and credit to the researcher. In our (and commonly held) view, the groups representing these disparate values could benefit from diplomatic mediation. More recently, it has become increasing apparent that managing China as a science and technology superpower represents another challenge for the U.S. Resolution of issues such as ownership of IP, rights to reagents, or use of skilled laboratory personnel from international collaborations may require the efforts of science diplomats. There are few international offices or “guardians” to protect junior and senior scientists in corporate or academic sectors from misuse of reagents or piracy. China’s failure to respect IP rights, and the resulting piracy, has drawn much attention. The media have also focused on the failure of watchdog government agencies to detect and manage these unwanted activities. Industrial espionage compromises U.S. interests. Moreover, Chinese and Russian hackers have cyberattacked U.S. technology companies, financial institutions, media groups, and defense contractors. In 2018, industrial spying was even reported in a major medical school in New York City where scientists were alleged to have illegally shared research findings with Chinese companies. The U.S. has a long history of hiring research personnel from other countries to staff its laboratories and industrial R&D centers. These scientists and engineers have made critical contributions to our nation’s well-being and security. These young Chinese and South Asian graduates of U.S. programs a generation ago now staff our research enterprise. However, recent trends in U.S. graduate school applications in science, technology, engineering and mathematics (STEM) reflect a downturn in foreign applicants, particularly from China. It is becoming increasingly apparent that the number of American-born students seeking STEM degrees is not sufficient to satisfy future demands of our high-tech workforce. While our own educational reforms must be augmented, we cannot ignore the need to continue to recruit overseas talent. We believe that foreign scientists can continue to make critical discoveries in the U. S. provided that their talent is nurtured, developed, and harnessed for the common good. At the same time, American companies cannot hire foreign scientists if they take the ideas they generate in U.S. laboratories back to their home countries without proper credit or permission. If the advancement of science is to succeed, greater diplomatic cooperation is needed to solve and manage proprietary issues for the benefit of all (5, 6). So, how does one strike the proper balance between security and growth? Science is a universal social enterprise; international conferences lead to friendships and productive collaborations between nations. Given that the U.S. and Chinese governments recognize the need for international communication and collaboration then surely there should be a mechanism for adjudicating anticipated conflicts. One approach would be for government, industrial, and academic stakeholders to form an international panel of scientists and engineers to manage any conflicts of interest between the need to protect proprietary information crucial to a company’s competitive edge, and the need for students and young faculty members to publish their findings. Smaller scale efforts along these lines have recently given rise to unique global partnerships, such as fellowship support by major pharmaceutical companies, which aim to address these conflicts to the benefit of both parties. An added feature of such arrangements is that they often provide corporate financing for research (9). Can this corporate-academic partnership model be adapted to multinational joint R&D efforts while protecting IP? This question falls squarely within the purview of international science diplomacy, whereby science diplomats can establish rules of conduct governing joint global technology development with proper IP protection. Despite the highly publicized and legitimate piracy allegations against China, at least some data indicates that the Chinese legal system is responding positively to worldwide pressure to honor foreign IP. A 2016 study by Love, Helmers, and Eberhardt, for example, found that between 2006 and 2011, foreign companies brought over 10 percent of patent infringement cases in China, and won over 70 percent of those cases (10). Today, “win rates” average around 80 percent, and “injunction rates,” around 98 percent (10). As Chinese scientists and engineers increasingly enter the top tier of the innovation space, their growing awareness of their own need for IP protection could be a powerful motivating force for the protection of all IP. As stated earlier, science diplomats could catalyze this progress even further by direct negotiations with those parties involved in the conflicts. An obvious flaw in this optimistic outlook is that scientists in the U.S. wield more influence with their government than scientists in China wield with theirs. And to the extent that the Chinese government could be encouraging IP theft, this must be addressed first by those international companies/firms who want to do business with the Chinese. Chinese investments, as well as tech incubators and targeted acquisitions, can enable access to U.S. technologies for commercial development. Although this conveys a level of risk to the developers, it may provide valuable opportunities for U.S. companies as well. In many respects, the extensive engagement and collaboration in innovation between the U.S. and China, often characterized by open exchanges of ideas, talent, and technologies, can be mutually beneficial in enriching and accelerating innovation in both countries. In summary, we believe that science diplomats could help address the increasingly complex issues that arise between accelerating scientific and engineering advances, and the need to protect national security and corporate IP. We also propose that this might be accomplished by asking the National Academies to recommend academic, corporate, and government scientific leaders to serve on an international scientific advisory board, and for the corresponding organizations in other countries to do the same. Access to the free flow of information promotes new knowledge and innovation. A return to a more restrictive intellectual environment is not only harmful to progress, but also nearly impossible to manage in the current internet age. A good place to start would be to engage the newly appointed head of the White House Office of Science and Technology Policy (the Science Advisor to the President of the United States), and working groups within established organizations. These organizations include the American Association for the Advancement of Science (AAAS) or the National Academies of Science, Engineering and Medicine, and corresponding international organizations. What incentive is there for a busy and successful scientist to serve in such capacity? It is the same altruism that motivates us to accept assignments as journal editors, manuscript reviewers, or funding agency panelists for the advancement of science toward the greater good.

**Solves every existential threat.**

**Haynes 18**—research associate in the Neurobiology Department at Harvard Medical School (Trevor, “Science Diplomacy: Collaboration in a rapidly changing world,”<http://sitn.hms.harvard.edu/flash/2018/science-diplomacy-collaboration-rapidly-changing-world/>, dml) // Re-Cut Justin

Today’s world is extremely interconnected. Most of us take this fact for granted, but its implications cannot be overstated. The rate at which information, resources, and people are able to move from one part of the world to another continues to accelerate at an alarming rate. Undoubtedly, this development has done society immense good. In the last century, global life expectancy has doubled, the percentage of people living in extreme poverty has dropped by about 60%, and world literacy rates have increased by a similar margin. But while these statistics paint a promising picture of human civilization, human progress rests on a fragile foundation of international cooperation; the challenges presented by an interconnected world are immense. War, natural disasters, and economic collapse now exert their effects globally, creating economic and ecological disasters and mass human migrations on an unprecedented scale. And with the US pulling out of major multilateral agreements on trade, climate change mitigation, and denuclearization, you might wonder if our ability to collaborate across borders productively is really up to the task. Global challenges require global solutions, and global solutions require collaboration between countries both big and small, rich and poor, authoritative and democratic. There are few human enterprises capable of providing continuity across these differences, and as technological solutions are becoming available to some of our most pressing issues, two in particular will be necessary to getting the job done: science and diplomacy. While science has long been utilized as a means to reach political ends—think of British explorer James Cook’s mapping of unexplored continents or the United States’ Manhattan Project—a more formal integration of scientists into the diplomatic process is being undertaken. This effort, which has led to scientists and academics playing a direct role in foreign policy development and international relations, has given birth of a new branch of diplomacy: science diplomacy. What is science diplomacy? As both the term and concept of science diplomacy have only recently gained traction in scientific and diplomatic circles, it’s been given a variety of definitions. But common to them all is the focus on applying scientific expertise to an international effort. The focus of these efforts is to solve international problems collaboratively while balancing economic prosperity, environmental protection, and societal wellbeing. The challenge of reaching this balance in the face of a booming global population cannot be understated, but this new branch of diplomacy is already at work and is producing results. International agreements such as the Paris Climate Agreement and the Iran Nuclear Deal are two famous examples, and science diplomacy is also establishing international collaboration in many other important arenas. While these lesser known efforts may not dominate the headlines, they are quietly tackling the global issues of today and preparing us for those of tomorrow. Natural disasters don’t respect national boundaries (and neither does the aftermath) In 2013, the number of refugees displaced by natural disasters—hurricanes, droughts, earthquakes—outnumbered those displaced by war. Current projections estimate as many as 1 billion people may be displaced by natural disasters by the year 2050. That would mean 1 in 9 people on the planet displaced and looking for a home. Compare this to the estimated 12 million refugees displaced by the war in Syria, and a frightening picture begins to form. As natural disasters continue to increase in both their frequency and intensity, solutions for mitigating the risk of total catastrophe will be underpinned by science, technology, and the ability of the international community to collaborate. Many organizations are starting to tackle these problems through the use of science diplomacy. The center for Integrated Research on Disaster Risk (IRDR) is composed of ten national committees—a network of government sponsored research institutions across the world in countries ranging the political and economic scale. These working groups have committed to improving disaster-risk-reduction science and technology while providing guidance to policy makers charged with implementing disaster prevention and mitigation strategies. IRDR is governed by a committee comprising experienced scientists and natural disaster experts. Its members come from all over the world—the US, China, Uganda, Norway, Mexico, Venezuela, and more. The diversity of this organization starts at the top and is crucial to developing comprehensive risk-reduction strategies. Data and insights from countries with varying areas of expertise are being shared and built upon, facilitating more accurate natural disaster forecasting and better strategies for mitigating their destructive power. And by including representatives from countries of varying political and economic power in its leadership, IRDR ensures that its work will consider the needs of the global community at large, rather than just nations with considerable wealth and political standing. The results of this type of international collaboration speak for themselves. Although humanity is grappling with more natural disasters than ever before, deaths related to these incidents continue to trend downward. Operating outside of the typical political framework that dominates foreign relations, IRDR provides a model for effective collaboration across the geopolitical spectrum in the face of a major global issue. Explore or Exploit? Managing international spaces Over the last few decades the polar ice cap that covers much of the Arctic Ocean has been shrinking. So much so, that during the warm season vast areas of previously solid ice have become open waters, creating opportunities for new trade routes and exposing the Arctic’s enormous reserves of oil and natural gas. Depending on your values, this will sound either like an opportunity for huge economic development of the region or the inevitable exploitation of one of the last untouched natural territories on the planet. And if you live there, like the half a million indigenous people who currently do, how this territory is managed will determine where you can live, how (and if) you can make a living, and what the health of the ecosystems that have supported Arctic life for millennia will look like. Luckily, such a scenario was predicted decades ago. In 1987, Mikhail Gorbachev, then leader of the then Soviet Union, delivered a speech outlining his aspirations for the arctic to be explored rather than exploited—to radically reduce military presence, create a collaborative multinational research effort, cooperate on matters of environmental security, and open up the Northern Sea Route for trade. This speech laid the foundation for the Arctic Council (Figure 1), which is one of the most successful examples of science diplomacy at work. Composed of the eight Arctic nations, including geopolitical rivals US and Russia, and numerous groups of indigenous peoples, the Arctic Council was established to maintain Gorbachev’s vision for the region while giving the indigenous peoples a seat at the negotiating table. The council’s activities are conducted by six scientific and technology-based working groups who conduct research in the area and provide knowledge and recommendations to the council members. As a result of this research, and allowing scientists to take part in the negotiations, the Arctic council has enacted several legally binding agreements regarding the sustainable development and environmental protection of the Arctic Ocean. These agreements have facilitated cooperation on a number of important issues including search and rescue operations, prevention and containment of maritime oil pollution, and, most recently, enhanced data sharing and scientific research collaborations. Against a backdrop of rapidly deteriorating diplomatic relations, the US and Russia have co-chaired task forces that laid the foundation for these agreements, proving to the world that meaningful results can be achieved through the avenue of science diplomacy, regardless of geopolitics. Science diplomacy going forward The technical expertise that characterizes science diplomacy will continue to be in demand across many realms of foreign policy. For example, synthetic biology and gene-editing technology continue to factor into matters regarding agriculture and trade. Also, digital currencies, such as bitcoin, have changed the way economists and businesses are approaching markets. Finally, machine learning and artificial intelligence are being used by governments as a means for population control, giving rise to a new type of governance—digital authoritarianism. While this expertise will be necessary for managing such issues, building international coalitions can’t be done through a purely scientific and technical lens. Convincing others to cooperate means providing them with a convincing argument to do so, and in terms they understand and find compelling. To achieve this, scientists must be trained to communicate their expertise in a way that moves stakeholders in policy discussions to act. This means appealing to motivations they have been largely taught to put to the side—whether they be political, economic, or emotional in nature—without obscuring the data and insights they have to offer. For our leaders, policy makers, and diplomats to effectively understand issues underpinned by science and technology, experts in these fields must continue to be integrated into the mechanisms of governance. With scientists in the US running for elections in numbers like never before, we can expect this trend to continue. And in the face of a rising wave of nationalism across the world, it is crucial that we do everything we can to foster collaboration. The future of human civilization depends on it.

## 4

**Debt ceiling extension means infrastructure bill passes now but it’s close**

**Cochrane 10/7** Cochrane, Emily. Emily Cochrane is a correspondent based in Washington. She has covered Congress since late 2018, focusing on the annual debate over government funding and economic legislation, ranging from emergency pandemic relief to infrastructure. "Senate Leaders Agree to Vote on Short-Term Debt Ceiling Increase." N.Y. Times, 7 Oct. 2021, www.nytimes.com/2021/10/07/us/politics/debt-ceiling-senate.html.

Senator Chuck Schumer of New York, the majority leader, announced that he reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to raise the federal borrowing limit through early December. “We have reached agreement to extend the debt ceiling through early December, and it’s our hope that we can get this done as soon as today.” “Republican and Democratic members and staff negotiated through the night in good faith. The pathway our Democratic colleagues have accepted will spare the American people any near-term crisis.” Video player loading Senator Chuck Schumer of New York, the majority leader, announced that he reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to raise the federal borrowing limit through early December.CreditCredit...T.J. Kirkpatrick for The New York Times Oct. 7, 2021Updated 3:17 p.m. ET WASHINGTON — Top Senate Democrats and Republicans said on Thursday that they had struck a deal to allow the debt ceiling to be raised through early December, temporarily staving off the threat of a first-ever default on the national debt after the G.O.P. agreed to temporarily drop its blockade of an increase. Senator Chuck Schumer, Democrat of New York and the majority leader, announced that he had reached an agreement with Senator Mitch McConnell of Kentucky, the minority leader, to clear the way for a vote as early as Thursday on a short-term extension, with potentially as few as 11 days left before a possible default. The movement came the day after Mr. McConnell partly backed down from his refusal to allow any such increase to move forward, offering a temporary reprieve as political pressure mounted to avoid being blamed for a fiscal calamity. “It’s our hope that we can get this done as soon as today,” Mr. Schumer said on Thursday morning on the Senate floor. But one day after Mr. McConnell indicated that Republicans would stand aside and allow the short-term increase to advance, he and his top deputies were laboring on Thursday to ensure his members will put aside their objections and clear the path for a vote. “We gotta see if the deal is done,” President Biden told reporters during a trip to Illinois. “I’m not sure of that yet.” The agreed-upon bill would boost the legal debt cap by $480 billion, which the Treasury Department estimates would be enough to allow the government to continue borrowing through at least Dec. 3. The current debt limit was reinstated at $28.4 trillion on Aug. 1, and the Treasury Department has been using so-called extraordinary measures to delay a breach of the borrowing cap since then. The agency estimated that the government would no longer be able to pay all of its bills by Oct. 18, once those fiscal accounting maneuvers were exhausted. Without congressional action before then, economists and lawmakers have warned of catastrophic economic consequences, including the U.S. government having to choose between making payments on the interest on its debt or sending out Social Security checks and other crucial assistance. The legislation under consideration on Thursday did not offer a hard deadline for when cash would run out, and it would not restart the Treasury Department’s ability to employ extraordinary measures, such as curbing certain government investments, a Treasury official said. Some Republicans said they thought the set dollar figure would ensure the limit would not be reached again until at least January. The actual “X-date” will be determined by tax revenues that the government receives and expenditures that it must make near the end of the year. Making such projections has been especially difficult this year because the pandemic relief programs that are in place have made it harder to predict when money is coming and going. “There is no way to predict with any precision exactly how much you would need to increase the debt limit by to get to a certain date,” said Shai Akabas, the director of economic policy at the Bipartisan Policy Center, an independent think tank. But in aiming for Dec. 3, the deal may position the next debt limit fight to overlap once again with negotiations over avoiding a government shutdown, as funding is set to lapse on that same day if Congress does not approve new spending legislation beforehand. Democrats hope nearly two additional months will give them space to focus on finalizing and enacting most of President Biden’s domestic agenda, including hammering out an array of intraparty disagreements over an expansive multi-trillion-dollar social safety net and climate change package. In raising the prospect of a stopgap extension on Wednesday, Mr. McConnell had said that Republicans would allow Democrats to use normal procedures to consider it. But that commitment appeared in doubt on Thursday afternoon, as Republicans privately objected and leaders toiled to line up the votes needed. Should even one senator demand a recorded vote, at least 10 Republicans would be needed to join every Democrat to muster the 60 votes needed to move the bill forward. Image The movement on debt ceiling negotiations came the day after Senator Mitch McConnell backed down partially from his refusal to allow any such increase to move forward. Credit...T.J. Kirkpatrick for The New York Times “We’re having conversations with our members and kind of figuring out where people are, but, as you might expect, this is not an easy one to whip,,” said Senator John Thune of South Dakota, the No. 2 Republican. He added that, “in the end we’ll be there, but it will be a painful birthing process.” Some Republicans were wary of angering their base by allowing the bill to move forward, especially after former President Donald J. Trump issued a statement on Wednesday that attacked Mr. McConnell for “folding to the Democrats.” Mr. Trump seemed to be pressuring Republicans to force a showdown in the face of a looming default, saying that Mr. McConnell had “all of the cards with the debt ceiling, it’s time to play the hand.” Even if Republicans clear the way to allow the measure to pass, it does nothing to address the crux of the partisan stalemate over the debt. Most notably, Republicans have not dropped their demand that Democrats ultimately use an arcane and time-consuming budget process known as reconciliation to lift the debt ceiling into next year. Democrats are currently using that process to steer around Republican opposition and push through a sprawling domestic package that would address climate change, expand the social safety net with more health care and education benefits, and increase taxes on the wealthy and corporations. “The pathway our Democratic colleagues have accepted will spare the American people any near-term crisis,” Mr. McConnell said on the Senate floor. The extension, he added, also means “there’ll be no question they’ll have plenty of time” to use the reconciliation process to approve a long-term increase.

**Plan requires negotiations that sap PC and pharma opposition removes trust**

Edward **Alden**, *Edward Alden is a columnist at Foreign Policy, the Ross distinguished visiting professor at Western Washington University, a senior fellow at the Council on Foreign Relations, and the author of Failure to Adjust: How Americans Got Left Behind in the Global Economy.* **5-10**-2021, "Big Pharma’s Patent Defeat Shows Corporate America Losing Power," Foreign Policy, <https://foreignpolicy.com/2021/05/10/big-pharma-patents-biden-vaccines-covid-intellectual-property-protection-global-trips-waiver-wto/> //SR

Big Pharma expects to win. And it almost always does. To that end, the industry spent $92 million lobbying officials in Washington just in the first three months of 2021—more than double the next-most aggressive industry. So it was shocking last week to see U.S. President Joe Biden stiff-arm the big drug companies and stand with countries like India and South Africa in insisting companies hand over intellectual property for the coronavirus vaccines so urgently needed around the world. Pharmaceutical Research and Manufacturers of America, the industry’s trade association, slammed the decision as “an unprecedented step that will undermine our global response to the pandemic.” The industry’s defeat was all the more striking because it comes at a time when drug companies are riding a rare wave of public approval for the speed at which they developed and produced remarkably effective breakthrough vaccines for COVID-19, including several that used a completely new technology never before deployed in vaccines. That the companies lost big despite this wave of sympathy should be a broader wake-up call to corporate America, which has grown accustomed to getting its way in Washington. Biden’s Democrats, who are pushing for tax increases on corporations and the wealthy, no longer genuflect to big business like Obama and Clinton administration Democrats. Republicans, while still reflexively pro-business, are in thrall to former U.S. President Donald Trump’s cult and no longer provide the cover to corporations they once did. The question for Big Pharma, and increasingly for big business generally, is whether companies can pursue their narrow interests through what has become an increasingly cynical alliance with Republicans. Or will they actually embrace the new role the vaccine breakthrough offers and step up to the challenge of helping solve a growing array of broader social problems? This was not the way it was supposed to go for the drug companies. For decades, the industry has not only been immensely powerful but shockingly arrogant in its exercise of that power. In 2016, for example, the companies used their Republican congressional friends to hold up then-U.S. President Barack Obama’s signature trade agreement: the Trans-Pacific Partnership (TPP). That trade pact would have been a good deal for the drug companies because it would have strengthened patent protection well beyond the current standard. Obama’s trade negotiator, Michael Froman, used every tool he had to persuade the 11 other countries involved in negotiations—which were worried about the high cost of new drugs—to accept an eight-year period of “data exclusivity” that would prevent copying of expensive new biologic drugs the industry was developing at the time. AbbVie’s biologic drug Humira, which treats rheumatoid arthritis and other inflammatory conditions, was the world’s top-selling drug last year; the current annual cost for Humira injections is more than $72,000. But the drug industry wanted more: 12 years of exclusivity to lock in even higher profits. Lobbyists persuaded then-Republican chairperson of the U.S. Senate Finance Committee, Orrin Hatch, to hold up the deal to strong-arm the Obama administration. The result was the TPP never came up for a ratification vote in Congress. Obama’s successor, Trump, who ran on a broader anti-trade campaign, pulled the United States out of the pact on his third day in office. The remaining 11 countries went ahead with the deal regardless but stripped out all the extra drug company protections, underscoring how isolated the U.S. negotiating position had been. The drug industry’s arrogance has a strong pedigree. In the World Trade Organization’s Uruguay Round of global negotiations in the early 1990s, Big Pharma had the best seat at the table. It was those negotiations that led to today’s level of patent protection—the so-called Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement. U.S. negotiators had been persuaded that such “intellectual property” industries would be the United States’ competitive advantage of the future. To persuade developing countries to protect patents and other intellectual property, the George H.W. Bush and Clinton administrations agreed to lift long-standing quotas on textile imports, ultimately accelerating the loss of hundreds of thousands of manufacturing jobs in the United States. The industry also keeps winning on its biggest domestic priority: resisting proposals that would require the U.S. government to lower the high price of branded drugs under Medicare. The companies have continued to blunt congressional efforts, despite the fact that more than 8 in 10 Americans support the idea. In his State of the Union address last month, Biden called for giving Medicare that negotiating power, but the proposal was then left out of the agenda for his American Families Plan and faces an uncertain future in Congress. How big a setback will the patent defeat be for the industry? Critics note that Biden’s proposed waiver of TRIPS protections for vaccine patents is far from a magic wand for a developing country like India struggling to produce enough vaccine doses to combat its massive COVID-19 outbreak. The new drugs, especially the mRNA vaccines, involve complex and exacting production processes; even with the freedom to copy the recipe, it could take these countries years to master production. Export controls and other supply-chain bottlenecks on key vaccine ingredients are currently a much bigger barrier than intellectual property rights to accelerating production around the world. And the details of the TRIPS waiver, which will be negotiated through the notoriously sclerotic World Trade Organization, could take months to iron out. In the meantime, the industry has a choice. It could go all-in with sympathetic Republicans to try to block the Biden administration. Republicans in the U.S. House of Representatives have introduced legislation that would prevent the administration from implementing the waiver. U.S. Sens. Tom Cotton and Thom Tillis issued a statement saying Biden’s move would “hand over America’s medical technology to adversarial states like China and Russia.” But there has been notable silence from both Senate and House Republican leadership. And although Trump, who remains the party’s symbolic leader, supported the massive 2017 corporate tax cut that lined the pockets of many companies, he was not notably sympathetic to the drug industry. In his 2016 campaign, Trump called for steps to lower drug prices, though he took no actions to accomplish this in his four years in office. Betting the industry’s future on this motley coalition seems like a poor gamble. Instead, the drug industry should show leadership by going all-in to vaccinate the world. Although the United States and Britain have hoarded vaccines, it is incontrovertible that unless the virus is contained everywhere, it will remain a serious threat for the foreseeable future. Both the public and private sectors have a huge stake in success; although companies like Pfizer and Moderna should be applauded for their ingenuity, drug development and rollout have been supported by billions of taxpayer dollars, pounds, and euros in the United States and Europe. There is plenty of room for drug companies and their shareholders to profit handsomely while working closely with governments to remove every obstacle to expanding production and expediting distribution. As with the vaccination effort in the United States, success will require the best of both government and the private sector. Other companies will face that same choice—to cooperate or to fight—as the Biden administration presses ahead with the most ambitious agenda of social legislation since former U.S. President Lyndon Johnson’s Great Society programs in the 1960s. Businesses could stick to the playbook and use their influence to try to block Biden’s signature efforts, such as the infrastructure package and the expansion of the safety net for families, to save a few bucks on their taxes. Or they could recognize that unless some of these gaping social needs are addressed, they will eventually face a costlier societal and political backlash. The pandemic is a rare opportunity for the most powerful industry of them all, Big Pharma, to right its course and set an example for the rest of the business world. It should not waste that opportunity.

**Bill solves warming**

**USA Today 7-20** [7-20-2021 "Climate change is at 'code red' status for the planet, and inaction is no longer an option". Editorial Board @ USA Today. Accessed 8/30/21.<https://www.usatoday.com/story/opinion/todaysdebate/2021/07/20/climate-change-biden-infrastructure-bill-good-start/7877118002/> //Recut Xu from 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 atmosphere 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.

**Extinction**

**Schultz 16** (Robert Schultz [Retired Professor and Chair of Computer Information Systems at Woodbury University] “Modern Technology and Human Extinction,” <http://proceedings.informingscience.org/InSITE2016/InSITE16p131-145Schultz2307.pdf>) RW

There is consensus that there is a relatively short window to reduce carbon emissions before drastic effects occur. Recent credible projections of the result of lack of rapid drastic action is an average temperature increase of about 10o F by 2050. This change alone will be incredibly disruptive to all life, but will also cause great weather and climate change. For comparison purposes, a 10 degree (Fahrenheit) decrease was enough to cause an ice layer 4000 feet thick over Wisconsin (Co2gether, 2012). Recently relevant information has surfaced about a massive previous extinction. This is the Permian extinction, which happened 252 million years ago, during which 95% of all species on earth, both terrestrial and aquatic, vanished. The ocean temperature after almost all life had disappeared was 15 degrees (Fahrenheit) above current ocean temperatures. Recent information about the Permian extinction indicates it was caused by a rapid increase in land and ocean temperatures, caused by the sudden appearance of stupendous amounts of carbon in the form of greenhouse gases (Kolbert, 2014, pp. 102-144). The origin of the carbon in these enormous quantities is not yet known, but one possibility is the sudden release of methane gases stored in permafrost. This is also a possibility in our current situation. If so, extinction would be a natural side effect of human processes. There is also a real but smaller possibility of what is called “runaway greenhouse,” in which the earth’s temperature becomes like Venus’ surface temperature of 800o The threat of extinction here is not entirely sudden. The threat is, if anything, worse. Changes in the atmosphere--mainly increases in the concentration of greenhouse gases in the atmosphere-- can start processes that can’t be reversed but which take long periods of time to manifest. “Runaway greenhouse” may be the worst. Once again, suggestions of technological solutions to this situation should be treated with some skepticism. These proposals are often made by technophiles ignoring all the evidence that technology is very much subject to unanticipated side effects and unanticipated failures. What has happened concerning the depletion of the ozone layer should be a clear warning against the facile uses of technology through geoengineering to alter the makeup of the entire planet and its atmosphere. The complicating factor in assessing extinction likelihood from climate change is corporations, especially American fossil fuel corporations such as Exxon-Mobil and Shell. Through their contributions, they have been able to delay legislation ameliorating global warming and climate change. As mentioned before, recently released papers from Exxon-Mobil show that the corporation did accept the scientific findings about global warming and climate change. But they concluded that maintaining their profits was more important than acting to ameliorate climate change. Since it is not a matter of getting corporations to appreciate scientific facts, the chances of extinction from climate change are good. To ameliorate climate change, it is important to leave a high percentage of fossil fuel reserves in the ground. But this is exactly what a profit-seeking fossil fuel corporation cannot do. One can still hope that because fossil fuel corporations are made up of individuals, increasingly bad consequences of global warming and climate change will change their minds about profits. But because of the lag in effects, this mind change will probably be too late. So I conclude we will probably see something like the effects of the Permian extinction perhaps some time around 2050. (The Permian extinction was 95% extinction of all species.) This assumes the release of methane from the arctic will take place around then.

## 5

**US dominance is secured in biotech now, but China’s closing the gap fast**

Scott **Moore 2020** [(Director of the Penn Global China Program at the University of Pennsylvania. Previously, Moore was a Young Professional and Water Resources Management Specialist at the World Bank Group, and Environment, Science, Technology, and Health Officer for China at the U.S.) “China’s Role In The Global Biotechnology Sector And Implications For U.S. Policy” https://www.brookings.edu/wp-content/uploads/2020/04/FP\_20200427\_china\_biotechnology\_moore.pdf]TDI

EXECUTIVE SUMMARY Even by the standards of emerging technologies, biotechnology has the potential to utterly transform geopolitics, economics, and society in the 21st century. Yet while the United States has long been the world leader in most segments of the global biotechnology sector, China is fast becoming a significant player. This brief assesses the implications of China’s changing role in biotechnology for the United States, which span national security, data security, and economic competitiveness. On current trends the United States is likely to remain the world leader in most biotechnology areas. However, the gap between China and the U.S. is narrowing in the biotechnology sector, and U.S. policymakers must boost public investment, liberalize immigration and foreign student visa policies, and enact regulatory reforms to ensure America remains competitive. At the same time, areas like vaccine development and regulation of emerging technologies like synthetic biology present rich opportunities for Sino-U.S. cooperation. INTRODUCTION Thanks to extensive government funding for biomedical research, an unparalleled ability to translate basic research into commercial products and applications, and strong intellectual property protections, the United States has been the dominant global player in developing and commercializing biotechnology for decades.1 This dominance is reflected in the fact that United States accounted for almost half of all biotechnology patents filed worldwide from 1999 to 2013.2 However, in the intervening years, and just as in the case of artificial intelligence and other emerging technologies, other nations, including South Korea and Singapore, have invested heavily in developing their biotechnology sectors and industries. These efforts pale, however, in comparison to those of China, and the sheer size and scale of the Chinese biotechnology industry pose a range of economic, security, and regulatory issues for American policymakers. The determination of China’s one-party state to become a leading player in biotechnology is reflected by the rapid growth in investment in the sector. Some estimates claim that collectively, China’s central, local, and provincial governments have invested over $100 billion in life sciences research and development. Regardless of the true figure, official encouragement has led to a torrid place of investment. In just the two-year period from 2015 to 2017, venture capital and private equity investment in the sector totaled some $45 billion.3 The value of commercial deals concluded in the fields of biology, medicine and medical machine technology, meanwhile increased from 25.8 billion renminbi (RMB), or $3.6 billion, in 2011 to over 75 billion RMB ($10.6 billion) in 2017.4 Annual research and development expenditures by Chinese pharmaceutical firms, the foundation of the biotechnology sector, rose from some 39 billion RMB in 2014 ($5.5 billion) to over 53 billion RMB (US$7.5 billion) by 2017. Expenditure on new product development among these firms, an important indicator of future growth potential, increased from just over 40 billion RMB ($5.6 billion) to almost 60 billion ($8.4 billion).5 By Western standards, some of these figures are still low. Swiss drugmaker Roche, the world leader in biotechnology research and development, spent some $11 billion in 2018 alone.6 As these figures suggest, the development of China’s biotechnology sector paints a nuanced picture for U.S. policymakers. On one hand, the sector’s rapid growth, and high-level commitment to continued investment, means that China will inevitably become an increasingly important player in the global biotechnology sector, with implications for national security, economic competitiveness, and regulation. An executive from In-Q-Tel, the U.S. government’s inhouse national security venture capital fund, warned Congress in a November 2019 hearing, for example, that China “intends to own the biorevolution… and they are building the infrastructure, the talent pipeline, the regulatory system, and the financial system they need to do that.”7 The CEO of European drugmaker AstraZeneca has similarly opined that “Much of [China’s] innovation in the last three to four years has been ‘me too,’ but now on the horizon we can see firstin-class innovation.”8 Yet on the other hand, while China’s biotechnology sector will almost certainly continue to grow in scale, sophistication, and competitiveness, there is little reason to believe on current trends that the United States will lose its edge in the sector. Indeed, the biggest risk to the global competitiveness of the U.S. biotechnology industry likely comes from the prospect of declining public investment and reduced mobility for world-class researchers and industry professionals. Moreover, the COVID-19 crisis underscores both the importance of continued investment in biotechnology and the many challenges to promoting effective international cooperation on global health security. This brief first examines the key policies and actors in China’s biotechnology sector, then offers an assessment of the sector’s current capabilities and future trends, and finally further explores the implications of developments in Chinese biotechnology for U.S. policy.

**The plan away sensitive national security information that allows China to lead ahead in biotech**

Josh **Rogin 4-8**. [(Washington Post Columnist covering National Security Issues.) “Opinion: The wrong way to fight vaccine nationalism” https://www.washingtonpost.com/opinions/global-opinions/the-wrong-way-to-fight-vaccine-nationalism/2021/04/08/9a65e15e-98a8-11eb-962b-78c1d8228819\_story.html ] TDI

Americans will not be safe from covid-19 until the entire world is safe. That basic truth shows why vaccine nationalism is not only immoral but also counterproductive. But the simplest solutions are rarely the correct ones, and some countries are using the issue to advance their own strategic interests. The Biden administration must reject the effort by some nations to turn our shared crisis into their opportunity. As the inequities of vaccine distribution worldwide grow, a group of more than 50 developing countries led by India and South Africa is pushing the World Trade Organization to dissolve all international intellectual property protections for pandemic-related products, which would include vaccine research patents, manufacturing designs and technological know-how. The Trump administration rejected the proposal to waive the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) for the pandemic when it was introduced in October. Now, hundreds of nongovernmental organizations and dozens of Democratic lawmakers are pushing the Biden administration to support the proposal. But many warn the move would result in the United States handing over a generation of advanced research — much of it funded by the U.S. taxpayer — to our country’s greatest competitors, above all China. In Congress, there’s justified frustration with the United States’ failure to respond to China’s robust vaccine diplomacy, in which Beijing has conditioned vaccine offers to pandemic-stricken countries on their ignoring security concerns over Chinese telecom companies or abandoning diplomatic recognition of Taiwan. There’s also a lot of anger at Big Pharma among progressives for profiting from the pandemic. “We are in a race against time, and unfortunately Big Pharma is standing in the way of speedily addressing this problem,” Rep. Jan Schakowsky (D-Ill.), who supports the effort to waive intellectual property protections, told me in an interview. “I think the real security issue is that while the United States balks in making sure that we help ourselves, that these adversaries will just jump right in.” Schakowsky argued that alternative measures for helping poor countries manufacture vaccines are simply not moving fast enough to save lives and that the United States has a duty to respond. House Speaker Nancy Pelosi (D-Calif.) personally conveyed her support for the waiver to President Biden, Schakowsky said. But Big Pharma is just one piece of the puzzle. Countries such as India and South Africa have been trying to weaken WTO intellectual property protections for decades. The mRNA technology that underpins the Pfizer and Moderna vaccines was funded initially by the Defense Advanced Research Projects Agency and has national security implications. Inside the Biden administration, the National Security Council has already convened several meetings on the issue. The waiver is supported by many global health officials in the White House and at the U.S. Agency for International Development, who believe the United States’ international reputation is suffering from its perceived “America First” vaccine strategy. On Wednesday, U.S. Trade Representative Katherine Tai spoke with WTO Director General Ngozi Okonjo-Iweala about the waiver issue. USTR is convening its own interagency meetings on the issue, which many see as a move to reassert its jurisdiction over WTO matters. If and when this does get to Biden’s desk, he will also hear from national security officials who believe that waiving TRIPS would result in the forced transfer of national security-sensitive technology to China, a country that strives to dominate the biotechnology *field* as part of its Made in China 2025 strategy. Once countries such as China have this technology, they will apply their mercantilist industrial models to ensure their companies dominate these strategically important industries, potentially erasing thousands of U.S. jobs. “We would be delivering a competitive advantage to countries that are increasingly viewed as our adversaries, at taxpayer expense, when there are other ways of doing this,” said Mark Cohen, senior fellow at the University of California at Berkeley Law School. A preferable approach would be to build more vaccine-manufacturing capacity in the United States and then give those vaccines to countries in need, said Cohen. The U.S. pharmaceutical industry would surely benefit, but that’s preferable to being dependent on other countries when the next pandemic hits. “If there’s anything that the pandemic has taught us, it’s that we need to have a robust supply chain, for ourselves and for the world generally,” Cohen said. What’s more, it’s not clear that waiving the TRIPS agreement for the pandemic would work in the first place. Bill Gates and others involved in the current vaccine distribution scheme have argued that it would not result in more vaccines, pointing out that licensing agreements are already successfully facilitating cooperation between patent-holding vaccine-makers and foreign manufacturers. Critics respond that such cooperation is still failing to meet the urgent needs in the developing world. Vaccine equity is a real problem, but waiving intellectual property rights is not the solution. If the current system is not getting shots into the arms of people in poor countries, we must fix that for their sake and ours. But the pandemic and our responses to it have geopolitical implications, whether we like it or not. That means helping the world and thinking about our strategic interests at the same time.

**China will convert biotech gains to military advantages, undermining US primacy**

Mercy A. **Kuo 2017** [(Executive Vice President at Pamir Consulting.) “The Great US-China Biotechnology and Artificial Intelligence Race” <https://thediplomat.com/2017/08/the-great-us-china-biotechnology-and-artificial-intelligence-race/>] TDI

Trans-Pacific View author Mercy Kuo regularly engages subject-matter experts, policy practitioners, and strategic thinkers across the globe for their diverse insights into the U.S. Asia policy. This conversation with Eleonore Pauwels – Director of Biology Collectives and Senior Program Associate, Science and Technology Innovation Program at the Wilson Center in Washington D.C. – is the 104th in “The Trans-Pacific View Insight Series.” Explain the motivation behind Chinese investment in U.S. genomics and artificial intelligence (AI). With large public and private investments inland and in the U.S., China plans to become the next AI-Genomics powerhouse, which indicates that these technologies will soon converge in China. China’s ambition is to lead the global market for precision medicine, which necessitates acquiring strategic technological and human capital in both genomics and AI. And the country excels at this game. A sharp blow in this U.S.-China competition happened in 2013 when BGI purchased Complete Genomics, in California, with the intent to build its own advanced genomic sequencing machines, therefore securing a technological knowhow mainly mastered by U.S. producers. There are significant economic incentives behind China’s heavy investment in the increasing convergence of AI and genomics. This golden combination will drive precision medicine to new heights by developing a more sophisticated understanding of how our genomes function, leading to precise, even personalized, cancer therapeutics and preventive diagnostics, such as liquid biopsies. By one estimate, the liquid biopsy market is expected to be worth $40 billion in 2017. Assess the implications of iCarbonX of Shenzhen’s decision to invest US$100 million in U.S.-company PatientsLikeMe relative to AI and genomic data collection. iCarbonX is a pioneer in AI software that learns to recognize useful relationships between large amounts of individuals’ biological, medical, behavioral and psychological data. Such a data-ecosystem will deliver insights into how an individual’s genome is mutating over time, and therefore critical information about this individual’s susceptibilities to rare, chronic and mental illnesses. In 2017, iCarbonX invested $100 million in PatientsLikeMe, getting a hold over data from the biggest online network of patients with rare and chronic diseases. If successful, this effort could turn into genetic gold, making iCarbonX one of the wealthiest healthcare companies in China and beyond. The risk factor is that iCarbonX is handling more than personal data, but potentially vulnerable data as the company uses a smartphone application, Meum, for customers to consult for health advice. Remember that the Chinese nascent genomics and AI industry relies on cloud computing for genomics data-storage and exchange, creating, in its wake, new vulnerabilities associated with any internet-based technology. This phenomenon has severe implications. How much consideration has been given to privacy and the evolving notion of personal data in this AI-powered health economy? And is our cyberinfrastructure ready to protect such trove of personal health data from hackers and industrial espionage? In this new race, will China and the U.S. have to constantly accelerate their rate of cyber and bio-innovation to be more resilient? Refining our models of genomics data protection will become a critical biosecurity issue. Why is Chinese access to U.S. genomic data a national security concern? Genomics and computing research is inherently dual-use, therefore a strategic advantage in a nation’s security arsenal. Using AI systems to understand how the functioning of our genomes impacts our health is of strategic importance for biodefense. This knowledge will lead to increasing developments at the forefront of medical countermeasures, including vaccines, antibiotics, and targeted treatments relying on virus-engineering and microbiome research. Applying deep learning to genomics data-sets could help geneticists learn how to use genome-editing (CRISPR) to efficiently engineer living systems, but also to treat and, even “optimize,” human health, with potential applications in military enhancements. A $15 million partnership between a U.S. company, Gingko Bioworks, and DARPA aims to genetically design new probiotics as a protection for soldiers against a variety of stomach bugs and illnesses. China could be using the same deep learning techniques on U.S. genomics data to better comprehend how to develop, patent and manufacture tailored cancer immunotherapies in high demand in the United States. Yet, what if Chinese efforts venture into understanding how to impact key genomics health determinants relevant to the U.S. population? Gaining access to increasingly large U.S. genomic data-sets gives China a knowledge advantage into leading the next steps in bio-military research. Could biomedical data be used to develop bioweapons? Explain. Personalized medicine advances mean that personalized bio-attacks are increasingly possible. The combination of AI with biomedical data and genome-editing technologies will help us predict genes most important to particular functions. Such insights will contribute to knowing how a particular disease occurs, how a newly-discovered virus has high transmissibility, but also why certain populations and individuals are more susceptible to it. Combining host susceptibility information with pathogenic targeted design, malicious actors could engineer pathogens that are tailored to overcome the immune system or the microbiome of specific populations.

**Primacy solves every impact - even if its imperfect, alternatives are worse**

Zachary **Keck 14**, Assistant Editor at The Diplomat, M.A. candidate in the Department of Public and International Affairs at George Mason University, “America’s Relative Decline: Should We Panic?”, 1-24,<http://thediplomat.com/2014/01/americas-relative-decline-should-we-panic/>

Still, on balance, the U.S. has been a positive force in the world, especially for a unipolar power. Certainly, it’s hard to imagine many other countries acting as benignly if they possessed the amount of relative power America had at the end of the Cold War. Indeed, the British were not nearly as powerful as the U.S. in the 19th Century and they incorporated most of the globe in their colonial empire. Even when it had to contend with another superpower, Russia occupied half a continent by brutally suppressing its populace. Had the U.S. collapsed and the Soviet Union emerged as the Cold War victor, Western Europe would likely be speaking Russian by now. It’s difficult to imagine China defending a rule-based, open international order if it were a unipolar power, much less making an effort to uphold a minimum level of human rights in the world.¶ Regardless of your opinion on U.S. global leadership over the last two decades, however, there is good reason to fear its relative decline compared with China and other emerging nations. To begin with, hegemonic transition periods have historically been the most destabilizing eras in history. This is not only because of the malign intentions of the rising and established power(s). Even if all the parties have benign, peaceful intentions, the rise of new global powers necessitates revisions to the “rules of the road.” This is nearly impossible to do in any organized fashion given the anarchic nature of the international system, where there is no central authority that can govern interactions between states.¶ We are already starting to see the potential dangers of hegemonic transition periods in the Asia-Pacific (and arguably the Middle East). As China grows more economically and militarily powerful, it has unsurprisingly sought to expand its influence in East Asia. This necessarily has to come at the expense of other powers, which so far has primarily meant the U.S., Japan, Vietnam and the Philippines. Naturally, these powers have sought to resist Chinese encroachments on their territory and influence, and the situation grows more tense with each passing day. Should China eventually emerge as a global power, or should nations in other regions enjoy a similar rise as Kenny suggests, this situation will play itself out elsewhere in the years and decades ahead.¶ All of this highlights some of the advantages of a unipolar system. Namely, although the U.S. has asserted military force quite frequently in the post-Cold War era, it has only fought weak powers and thus its wars have been fairly limited in terms of the number of casualties involved. At the same time, America’s preponderance of power has prevented a great power war, and even restrained major regional powers from coming to blows. For instance, the past 25 years haven’t seen any conflicts on par with the Israeli-Arab or Iran-Iraq wars of the Cold War. As the unipolar era comes to a close, the possibility of great power conflict and especially major regional wars rises dramatically. The world will also have to contend with conventionally inferior powers like Japan acquiring nuclear weapons to protect their interests against their newly empowered rivals.¶ But even if the transitions caused by China’s and potentially other nations’ rises are managed successfully, there are still likely to be significant negative effects on international relations. In today’s “globalized” world, it is commonly asserted that many of the defining challenges of our era can only be solved through multilateral cooperation. Examples of this include climate change, health pandemics, organized crime and terrorism, global financial crises, and the proliferation of weapons of mass destruction, among many others.¶ A unipolar system, for all its limitations, is uniquely suited for organizing effective global action on these transnational issues. This is because there is a clear global leader who can take the initiative and, to some degree, compel others to fall in line. In addition, the unipole’s preponderance of power lessens the intensity of competition among the global players involved. Thus, while there are no shortages of complaints about the limitations of global governance today, there is no question that global governance has been many times more effective in the last 25 years than it was during the Cold War.¶ The rise of China and potentially other powers will create a new bipolar or multipolar order. This, in turn, will make solving these transnational issues much more difficult. Despite the optimistic rhetoric that emanates from official U.S.-China meetings, the reality is that Sino-American competition is likely to overshadow an increasing number of global issues in the years ahead. If other countries like India, Turkey, and Brazil also become significant global powers, this will only further dampen the prospects for effective global governance.