## 1NC – Off

#### Interpretation: intellectual property protections is a generic bare plural. The aff may not defend that member nations of the World Trade Organization reduce a subset of intellectual property protections for medicines.

Nebel 19 Jake Nebel [Jake Nebel is an assistant professor of philosophy at the University of Southern California and executive director of Victory Briefs.] , 8-12-2019, "Genericity on the Standardized Tests Resolution," Briefly, https://www.vbriefly.com/2019/08/12/genericity-on-the-standardized-tests-resolution/ SM

Both distinctions are important. Generic resolutions can’t be affirmed by specifying particular instances. But, since generics tolerate exceptions, plan-inclusive counterplans (PICs) do not negate generic resolutions. Bare plurals are typically used to express generic generalizations. But there are two important things to keep in mind. First, generic generalizations are also often expressed via other means (e.g., definite singulars, indefinite singulars, and bare singulars). Second, and more importantly for present purposes, bare plurals can also be used to express existential generalizations. For example, “Birds are singing outside my window” is true just in case there are some birds singing outside my window; it doesn’t require birds in general to be singing outside my window. So, what about “colleges and universities,” “standardized tests,” and “undergraduate admissions decisions”? Are they generic or existential bare plurals? On other topics I have taken great pains to point out that their bare plurals are generic—because, well, they are. On this topic, though, I think the answer is a bit more nuanced. Let’s see why. 1.1 “Colleges and Universities” “Colleges and universities” is a generic bare plural. I don’t think this claim should require any argument, when you think about it, but here are a few reasons. First, ask yourself, honestly, whether the following speech sounds good to you: “Eight colleges and universities—namely, those in the Ivy League—ought not consider standardized tests in undergraduate admissions decisions. Maybe other colleges and universities ought to consider them, but not the Ivies. Therefore, in the United States, colleges and universities ought not consider standardized tests in undergraduate admissions decisions.” That is obviously not a valid argument: the conclusion does not follow. Anyone who sincerely believes that it is valid argument is, to be charitable, deeply confused. But the inference above would be good if “colleges and universities” in the resolution were existential. By way of contrast: “Eight birds are singing outside my window. Maybe lots of birds aren’t singing outside my window, but eight birds are. Therefore, birds are singing outside my window.” Since the bare plural “birds” in the conclusion gets an existential reading, the conclusion follows from the premise that eight birds are singing outside my window: “eight” entails “some.” If the resolution were existential with respect to “colleges and universities,” then the Ivy League argument above would be a valid inference. Since it’s not a valid inference, “colleges and universities” must be a generic bare plural. Second, “colleges and universities” fails the upward-entailment test for existential uses of bare plurals. Consider the sentence, “Lima beans are on my plate.” This sentence expresses an existential statement that is true just in case there are some lima beans on my plate. One test of this is that it entails the more general sentence, “Beans are on my plate.” Now consider the sentence, “Colleges and universities ought not consider the SAT.” (To isolate “colleges and universities,” I’ve eliminated the other bare plurals in the resolution; it cannot plausibly be generic in the isolated case but existential in the resolution.) This sentence does not entail the more general statement that educational institutions ought not consider the SAT. This shows that “colleges and universities” is generic, because it fails the upward-entailment test for existential bare plurals. Third, “colleges and universities” fails the adverb of quantification test for existential bare plurals. Consider the sentence, “Dogs are barking outside my window.” This sentence expresses an existential statement that is true just in case there are some dogs barking outside my window. One test of this appeals to the drastic change of meaning caused by inserting any adverb of quantification (e.g., always, sometimes, generally, often, seldom, never, ever). You cannot add any such adverb into the sentence without drastically changing its meaning. To apply this test to the resolution, let’s again isolate the bare plural subject: “Colleges and universities ought not consider the SAT.” Adding generally (“Colleges and universities generally ought not consider the SAT”) or ever (“Colleges and universities ought not ever consider the SAT”) result in comparatively minor changes of meaning. (Note that this test doesn’t require there to be no change of meaning and doesn’t have to work for every adverb of quantification.) This strongly suggests what we already know: that “colleges and universities” is generic rather than existential in the resolution. Fourth, it is extremely unlikely that the topic committee would have written the resolution with the existential interpretation of “colleges and universities” in mind. If they intended the existential interpretation, they would have added explicit existential quantifiers like “some.” No such addition would be necessary or expected for the generic interpretation since generics lack explicit quantifiers by default. The topic committee’s likely intentions are not decisive, but they strongly suggest that the generic interpretation is correct, since it’s prima facie unlikely that a committee charged with writing a sentence to be debated would be so badly mistaken about what their sentence means (which they would be if they intended the existential interpretation). The committee, moreover, does not write resolutions for the 0.1 percent of debaters who debate on the national circuit; they write resolutions, at least in large part, to be debated by the vast majority of students on the vast majority of circuits, who would take the resolution to be (pretty obviously, I’d imagine) generic with respect to “colleges and universities,” given its face-value meaning and standard expectations about what LD resolutions tend to mean.

#### It applies to IP protections:

#### Upward entailment test – spec fails the upward entailment test because saying that nations ought to reduce one type of IPP does not entail that those nations ought to reduce all kinds of IPP

#### Adverb test – adding “usually” to the res doesn’t substantially change its meaning because a reduction is universal and permanent

#### Violation: They have a one and done approach which means they don’t ban all sort of IP- that’s their Feldman evidence

#### Vote neg:

#### Semantics outweigh:

#### T is a constitutive rule of the activity and a basic aff burden – they agreed to debate the topic when they came here

#### Jurisdiction – you can’t vote aff if they haven’t affirmed the resolution

#### Only stasis point we know before the round so it controls the internal link to engagement – there’s no way to use ground if debaters aren’t prepared to defend it

#### Limits – there are countless affs accounting for every kind of intellectual property protections, like tertiary patents, provisional patents, and design patents – unlimited topics incentivize obscure affs that negs won’t have prep on – limits are key to reciprocal prep burden – potential abuse doesn’t justify foregoing the topic and 1AR theory checks PICs

#### Ground – spec guts core generics like innovation that rely on reducing all kinds of IP for all medicines because individual types of IP don’t substantially affect the pharmaceutical industry – also means there is no universal DA to spec affs

#### TVA solves – read as an advantage to whole rez

#### Paradigm issues:

#### Drop the debater – their abusive advocacy skewed the debate from the start

#### Comes before 1AR theory – NC abuse is responsive to them not being topical

#### No RVIs – fairness and education are a priori burdens – and encourages baiting – outweighs because if T is frivolous, they can beat it quickly

#### Fairness is a voter ­– necessary to determine the better debater

#### Education is a voter – why schools fund debate

## 1NC – Off

#### CP: Member nations of the World Trade Organization should enter into a prior and binding consultation with the World Health Organization over reducing intellectual property protections by implementing a one-and-done approach for patent protection s. Member nations will support the proposal and adopt the results of consultation.

#### WHO says yes

#### It supports increasing the availability of generics

Hoen 03 [(Ellen T., researcher at the University Medical Centre at the University of Groningen, The Netherlands who has been listed as one of the 50 most influential people in intellectual property by the journal Managing Intellectual Property, PhD from the University of Groningen) “TRIPS, Pharmaceutical Patents and Access to Essential Medicines: Seattle, Doha and Beyond,” Chicago Journal of International Law, 2003] JL

However, subsequent resolutions of the World Health Assembly have strengthened the WHO’s mandate in the trade arena. In 2001, the World Health Assembly adopted two resolutions in particular that had a bearing on the debate over TRIPS [30]. The resolutions addressed:

– the need to strengthen policies to increase the availability of generic drugs;

– and the need to evaluate the impact of TRIPS on access to drugs, local manufacturing capacity, and the development of new drugs.

#### It’s outspoken against evergreening

WHO 06 [(World Health Organization, specialized agency of the United Nations responsible for international public health) “Public health, innovation and intellectual property rights,” Report of the Commission on Intellectual Property Rights, Innovation, and Public Health, 2006] JL

Though difficult to discern from incremental innovation in practice, socalled “evergreening” is importantly different. As usually understood, “evergreening” occurs when, in the absence of any apparent additional therapeutic benefits, patent-holders use various strategies to extend the length of their exclusivity beyond the 20-year patent term. President Bush, in 2002, provided a working definition while announcing reforms in response to a Federal Trade Commission (FTC) report (73) on delays to the entry of generic products onto the market:

The FTC...discovered that some brand name drug manufacturers may have manipulated the law to delay the approval of competing generic drugs. When a drug patent is about to expire, one method some companies use is to file a brand new patent based on a minor feature, such as the color of the pill bottle or a specific combination of ingredients unrelated to the drug’s effectiveness … In the meantime, the lower-cost generic drug is shut out of the market … This is not how Congress intended the law to work. Today, I’m taking action to close the loopholes, to promote fair competition and to reduce the cost of prescription drugs in America … These steps we take today will not undermine patent protection. Instead, we are enforcing the original intent of a good law. Our message to brand name manufacturers is clear: you deserve the fair rewards of your research and development; you do not have the right to keep generic drugs off the market for frivolous reasons (81).

Evergreening can occur in a number of ways but typically, as noted by President Bush, it arises when companies file and obtain patents, subsequent to the original patent, on other aspects of the same compound or reformulations of the original compound in ways that might be regarded as of no incremental therapeutic value, but which are nevertheless patentable. For instance, strategies include a similar but different dosage form such as capsules rather than tablets, salts, esters, or crystals (polymorphs) of the same product or other changes dependent on the ingenuity of the formulators and the lawyers. These types of strategies occur in almost all jurisdictions, especially for lucrative products (see Box 4.7) (82, 83).

Where there is a linkage between the patent system and the procedures for approving new drugs (for example, in Canada and the United States), the policy issues take a particular form. In the United States, for instance, the Federal Trade Commission catalogued a number of instances where generic entry was delayed by up to fi ve years by successive stays of up to 30 months on the entry of a generic competitor (see Box 4.7). These stays were provided automatically under the United States law if a brand-holder challenged the generic company for infringement, until the changes announced by President Bush reduced this to one stay only.

These linkage arrangements are essentially supplementary to the patent system. But they alter the way in which the patent system operates for pharmaceutical products.15 Nevertheless, the final decisions on patent validity and infringement cases lie with the courts. This means that any change to tackle evergreening at its roots requires measures to reduce the likelihood of such patents being granted or, if granted, of being upheld in the courts. While, as previously stated, some forms of incremental innovation might be important in terms of patient benefit, faced with the reality of the TRIPS agreement, developing countries need to consider how their own patent laws may deal with this issue. Patents on minor developments are used, often aggressively, by some patent holders to delay or block generic competition. Small and medium-sized generic firms in developing countries, in particular, are generally unable to sustain costly and lengthy legal challenges, and opt to avoid fields where litigation may arise. The outcome may be the reduction or suppression of competition and, in some cases higher prices for patients.

#### Consultation displays strong leadership, authority, and cohesion among member states which are key to WTO legitimacy

Gostin et al 15 [(Lawrence O., Linda D. & Timothy J. O’Neill Professor of Global Health Law at Georgetown University, Faculty Director of the O’Neill Institute for National & Global Health Law, Director of the World Health Organization Collaborating Center on Public Health Law & Human Rights, JD from Duke University) “The Normative Authority of the World Health Organization,” Georgetown University Law Center, 5/2/2015] JL

Members want the WHO to exert leadership, harmonize disparate activities, and set priorities. Yet they resist intrusions into their sovereignty, and want to exert control. In other words, ‘everyone desires coordination, but no one wants to be coordinated.’ States often ardently defend their geostrategic interests. As the Indonesian virus-sharing episode illustrates, the WHO is pulled between power blocs, with North America and Europe (the primary funders) on one side and emerging economies such as Brazil, China, and India on the other. An inherent tension exists between richer ‘net contributor’ states and poorer ‘net recipient’ states, with the former seeking smaller WHO budgets and the latter larger budgets.

Overall, national politics drive self-interest, with states resisting externally imposed obligations for funding and action. Some political leaders express antipathy to, even distrust of, UN institutions, viewing them as bureaucratic and inefficient. In this political environment, it is unsurprising that members fail to act as shareholders. Ebola placed into stark relief the failure of the international community to increase capacities as required by the IHR. Guinea, Liberia and Sierra Leone had some of the world's weakest health systems, with little capacity to either monitor or respond to the Ebola epidemic.20 This caused enormous suffering in West Africa and placed countries throughout the region e and the world e at risk. Member states should recognize that the health of their citizens depends on strengthening others' capacity. The WHO has a central role in creating systems to facilitate and encourage such cooperation.

The WHO cannot succeed unless members act as shareholders, foregoing a measure of sovereignty for the global common good. It is in all states' interests to have a strong global health leader, safeguarding health security, building health systems, and reducing health inequalities. But that will not happen unless members fund the Organization generously, grant it authority and flexibility, and hold it accountable.

#### WHO is critical to disease prevention – it is the only international institution that can disperse information, standardize global public health, and facilitate public-private cooperation

Murtugudde 20 [(Raghu, professor of atmospheric and oceanic science at the University of Maryland, PhD in mechanical engineering from Columbia University) “Why We Need the World Health Organization Now More Than Ever,” Science, 4/19/2020] JL

WHO continues to play an indispensable role during the current COVID-19 outbreak itself. In November 2018, the US National Academies of Sciences, Engineering and Medicine organised a workshop to explore lessons from past influenza outbreaks and so develop recommendations for pandemic preparedness for 2030. The salient findings serve well to underscore the critical role of WHO for humankind.

The world’s influenza burden has only increased in the last two decades, a period in which there have also been 30 new zoonotic diseases. A warming world with increasing humidity, lost habitats and industrial livestock/poultry farming has many opportunities for pathogens to move from animals and birds to humans. Increasing global connectivity simply catalyses this process, as much as it catalyses economic growth.

WHO coordinates health research, clinical trials, drug safety, vaccine development, surveillance, virus sharing, etc. The importance of WHO’s work on immunisation across the globe, especially with HIV, can hardly be overstated. It has a rich track record of collaborating with private-sector organisations to advance research and development of health solutions and improving their access in the global south.

It discharges its duties while maintaining a dynamic equilibrium between such diverse and powerful forces as national securities, economic interests, human rights and ethics. COVID-19 has highlighted how political calculations can hamper data-sharing and mitigation efforts within and across national borders, and WHO often simply becomes a convenient political scapegoat in such situations.

International Health Regulations, a 2005 agreement between 196 countries to work together for global health security, focuses on detection, assessment and reporting of public health events, and also includes non-pharmaceutical interventions such as travel and trade restrictions. WHO coordinates and helps build capacity to implement IHR.

#### WHO diplomacy solves great power conflict

Murphy 20 [(Chris, U.S. senator from Connecticut serving on the U.S. Senate Foreign Relations Committee) “The Answer is to Empower, Not Attack, the World Health Organization,” War on the Rocks, 4/21/2020] JL

The World Health Organization is critical to stopping disease outbreaks and strengthening public health systems in developing countries, where COVID-19 is starting to appear. Yemen announced its first infection earlier this month, and other countries in Africa, Asia and the Middle East are at severe risk. Millions of refugees rely on the World Health Organization for their health care, and millions of children rely on the WHO and UNICEF to access vaccines.

The World Health Organization is not perfect, but its team of doctors and public health experts have had major successes. Their most impressive claim to fame is the eradication of smallpox – no small feat. More recently, the World Health Organization has led an effort to rid the world of two of the three strains of polio, and they are close to completing the trifecta.

These investments are not just the right thing to do; they benefit the United States. Improving health outcomes abroad provides greater political and economic stability, increasing demand for U.S. exports. And, as we are all learning now, it is in America’s national security interest for countries to effectively detect and respond to potential pandemics before they reach our shores.

As the United States looks to develop a new global system of pandemic prevention, there is absolutely no way to do that job without the World Health Organization. Uniquely, it puts traditional adversaries – like Russia and the United States, India and Pakistan, or Iran and Saudi Arabia – all around the same big table to take on global health challenges. It has relationships with the public health leaders of every nation, decades of experience in tackling viruses and diseases, and the ability to bring countries together to tackle big projects. This ability to bridge divides and work across borders cannot be torn down and recreated – not in today’s environment of major power competition – and so there is simply no way to build an effective international anti-pandemic infrastructure without the World Health Organization at the center.

## 1NC – Off

#### The Aff’s Portrayal of a world where medical inequality is solved by deregulation perpetuates the neoliberal myth of a perfect market **Kapczynski 14** [(Amy, a Professor of Law at Yale Law School, Faculty Co-Director of the Global Health Justice Partnership, and Faculty Co-Director of the Collaboration for Research Integrity and Transparency. She is also Faculty Co-Director of the Law and Political Economy Project and cofounder of the Law and Political Economy blog. Her areas of research include information policy, intellectual property law, international law, and global health.) “INTELLECTUAL PROPERTY’S LEVIATHAN” Duke Law, Law & Contemporary problems, 2014. <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=4710&context=lcp>] BC

Over the last decade or so, a powerful set of critiques has emerged to contest the dominant account just sketched out as well as the contemporary state of IP law.12 These arguments have come from many directions, some even arising from scholars who previously were champions of the dominant account.13 The most prominent and potent line of theoretical critique in the legal literature has come in the guise of arguments for free culture and the “information commons” and has been most influentially articulated by Lawrence Lessig and Yochai Benkler.14 Both have stressed the problems with expansive exclusive rights regimes in information and have also sketched a set of actually existing alternatives to market-based exclusionary forms of information and cultural production.

Lessig has written a series of influential books that have made him a “rock star of the information age,”15 particularly for young Internet and free-culture activists. He has argued powerfully, for example, that existing copyright law is in deep conflict with the radical new possibilities for creativity in the digital age. As he points out, when a mother posting a video of her toddler dancing to a Prince song on YouTube is threatened with a $150,000 fine for copyright infringement, something has gone seriously awry.16 Lessig also contends that copyright law today is too long, too expansive, and instantiates a “permission culture” that is antithetical to free expression in the age of the remix.17 As he puts it, “the Internet has unleashed an extraordinary possibility for many to participate in the process of building and cultivating a culture that reaches far beyond local boundaries,” creating the possibility of markets that “include a much wider and more diverse range of creators,” if not stifled by incumbents who use IP law to “protect themselves against this competition.”18

Benkler’s work has also been extraordinarily formative in the field, particularly for his insights into the multiplicity of modes of information production. As he has stressed, the conventional justification for IP does not account for the many successful and longstanding modes of market nonexclusionary information production.19 For example, attorneys write articles to attract clients, software developers sell services customizing free and opensource software for individual clients, and bands give music away for free to increase revenues from touring or merchandise.20 More pathbreaking still is Benkler’s account of the importance of “commons-based peer production,” a form of socially motivated and cooperative production exemplified by the volunteer network that maintains Wikipedia or the groups of coders who create open-source software products such as the Linux operating system.21 In the digital networked age, as Benkler describes, the tools of information production are very broadly distributed, “creating new opportunities for how we make and exchange information, knowledge, and culture.”22 These changes have increased the relative role in our information economy of nonproprietary production and facilitate “new forms of production [that] are based neither in the state nor in the market.”23 Because commons-based peer production is not hierarchically organized and is motivated by social dynamics and concerns, it also offers new possibilities for human development, human freedom, a more critical approach to culture, and more democratic forms of political participation.24

This line of critique has been profoundly generative and has helped launch an important new conceptualization of the commons as a paradigm. That paradigm, as a recent book puts it, “helps us ‘get outside’ of the dominant discourse of the market economy and helps us represent different, more wholesome ways of being.”25 Proponents of the commons concept draw upon contemporary articulations of successful commons-based resource management by Elinor Ostrom and her followers.26 They do mobilize retellings of the political and economic history of the commons in land in Europe before enclosure,27 and recent evidence from psychology and behavioral economics that suggests that humans have deep tendencies toward cooperation and reciprocation.28 They argue that A key revelation of the commons way of thinking is that we humans are not in fact isolated, atomistic individuals. We are not amoebas with no human agency except hedonistic “utility preferences” expressed in the marketplace. No: We are commoners—creative, distinctive individuals inscribed within larger wholes. We may have unattractive human traits fueled by individual fears and ego, but we are also creatures entirely capable of self-organization and cooperation; with a concern for fairness and social justice; and willing to make sacrifices for the larger good and future generations.29

This stands, of course, as a powerful rebuke to the neoliberal imaginary, which “constructs and interpellates individuals as . . . rational, calculating creatures whose moral autonomy is measured by their capacity for ‘self-care’— the ability to provide for their own needs and service their own ambitions.”30

III

Given this radical—and, in my view, critically important—attempt to rethink the subject at the core of neoliberal accounts, it is all the more striking that proponents of the commons often appear to adopt a neoliberal image of the state. For example, the introduction to a recently edited volume that gathers writings on the commons from seventy-three authors in thirty countries (entitled, tellingly, The Wealth of the Commons: A World Beyond Market and State) has this to say:

The presumption that the state can and will intervene to represent the interests of citizens is no longer credible. Unable to govern for the long term, captured by commercial interests and hobbled by stodgy bureaucratic structures in an age of nimble electronic networks, the state is arguably incapable of meeting the needs of citizens as a whole.31

The commons, they suggest, is a concept that seeks not only to liberate us from predatory and dysfunctional markets, but also from predatory and dysfunctional states. Something immediately seems incongruous here. If people are inherently cooperative reciprocators, why are states irredeemably corrupt? After all, as Harold Demsetz famously wrote in his 1967 attack on Arrow’s optimism about state production of information, “[g]overnment is a group of people.”32

Lessig, one of the progenitors of the language of the commons in the informational domain, often leads with a similar view of the state:

[I]f the twentieth century taught us one lesson, it is the dominance of private over state ordering. Markets work better than Tammany Hall in deciding who should get what, when. Or as Nobel Prize-winning economist Ronald Coase put it, whatever problems there are with the market, the problems with government are more profound.33

Lessig reveals his own sense of the power of this conception of the state when he seeks to tar IP law with the same brush; we should rebel against current IP law, he suggests, because we should “limit the government’s role in choosing the future of creativity.”34

Benkler is more measured but admits as well to viewing the state as “a relatively suspect actor.”35 We should worry, he suggests, that direct governmental intervention “leads to centralization in the hands of government agencies and powerful political lobbies,”36 a view that echoes the neoliberal account described above.

It should perhaps not surprise us that leading critics of neoliberal information policy embrace a neoliberal conception of the state. After all, neoliberalism is not merely an ideology, but also a set of policy prescriptions that may have helped to call forth the state that it has described. As David Harvey puts it, “[t]he neoliberal fear that special-interest groups would pervert and subvert the state is nowhere better realized than in Washington, where armies of corporate lobbyists . . . effectively dictate legislation to match their special interests.”37

There are, it must be said, few areas of law that better exemplify this problem than IP law. For example, Jessica Litman has documented the astonishing process through which the 1976 Copyright Act was drafted, in which Congress delegated most of the drafting to interest groups that were forced to negotiate with one another.38 Other scholars have offered similarly startling accounts of the genesis of the most important IP treaty today, the TradeRelated Aspects of Intellectual Property Rights (TRIPS) Agreement. TRIPS came into force in 1996, revolutionizing international IP law by both imposing new standards and by rendering them enforceable through the WTO’s disputeresolution system, which authorizes trade retaliation to enforce its judgments. Most countries in the world are members of TRIPS, and the Agreement introduced, for developing countries in particular, substantial new obligations, such as the obligation to grant patents on medicines and food-related inventions. Several excellent histories of the treaty have been written, documenting its beginnings as a brash idea proposed by “twelve chief executive officers (representing pharmaceutical, entertainment, and software industries).”39 As Susan Sell has described, the TRIPS Agreement was a triumph of industry organizing. Through TRIPS, Industry revealed its power to identify and define a trade problem, devise a solution, and reduce it to a concrete proposal that could be sold to governments.

#### Neoliberal exploitation causes extinction.

Clark 18 (Brett, associate professor of sociology and sustainability studies at the University of Utah; Stefano B. Longo, Assistant Professor specializing in Environmental Sociology at NC State; “Land–Sea Ecological Rifts”, Land–Sea Ecological Rifts, https://monthlyreview.org/2018/07/01/land-sea-ecological-rifts/)

Covering approximately 70 percent of the Earth’s surface, the World Ocean is “the largest ecosystem.”1 Today all areas of the ocean are affected by multiple anthropogenic effects—such as overfishing, pollution, and emission of greenhouse gases, causing warming seas as well as ocean acidification—and over 40 percent of the ocean is strongly affected by human actions. Furthermore, the magnitude of these impacts and the speed of the changes are far greater than previously understood.2 Biologist Judith S. Weis explains that “the most widespread and serious type of [marine] pollution worldwide is eutrophication due to excess nutrients.”3 The production and use of fertilizers, sewage/waste from humans and farm animals, combustion of fossil fuels, and storm water have all contributed to dramatic increases in the quantity of nutrients in waterways and oceans. Research in 2008 indicated that there were over 400 “dead zones,” areas of low oxygen, mostly near the mouths of rivers.4 Nutrient overloading thus presents a major challenge to maintaining healthy aquatic ecosystems.

Nutrients are a basic source of nourishment that all organisms need to survive. Plants require at least eighteen elements to grow normally; of these, nitrogen, phosphorus, and potassium are called macronutrients, because they are needed in larger quantities. While all essential nutrients exist in the biosphere, these three are the ones most commonly known to be deficient in commercial agricultural production systems. Beginning in the early twentieth century with the Haber-Bosch process, atmospheric nitrogen was converted into ammonia to create synthetic nitrogen fertilizer. The fixation of nitrogen, an energy-intensive process, made the nutrient far more widely available for use in agriculture. This in turn dramatically changed production systems, which no longer depended on legumes and manures to biologically supply nitrogen for other crops such as wheat, corn, and most vegetables.

In the modern era, particularly since the Second World War, the increased production and use of fertilizers served to greatly expand food production and availability. Major macronutrients are routinely applied to soils in order to maintain and increase the growth of plant life on farms, as well as private and public landscapes such as golf courses, nurseries, parks, and residences. They are used to produce fruits, vegetables, and fibers for human and non-human consumption, expand areas of recreation, and beautify communities. However, like many aspects of modern production, given the larger social dynamics and determinants that shape socioecological relationships, these technological and economic developments have generated serious negative—often unforeseen—consequences. The wide expansion and increasing rates of nitrogen and phosphorus application have caused severe damage to aquatic systems in particular. Rivers, streams, lakes, bays (estuaries), and ocean systems have been inundated with nutrient runoff, which has had far-reaching effects.

Here we examine the socioecological relationships and processes associated with the transfer of nutrients from terrestrial to marine systems. We employ a metabolic analysis to highlight the interchange of matter and energy within and between socioecological systems. In particular, we show how capitalist agrifood production contributes to distinct environmental problems, creating a metabolic rift in the soil nutrient cycle. We emphasize how the failure to mend nutrient cycles in agrifood systems has led to approaches that produce additional ruptures, such as those associated with nutrient overloading in marine systems. This analysis reveals the ways that the social relations of capitalist agriculture tend to produce interconnected ecological problems, such as those in terrestrial and aquatic systems. Further, we contend that these processes undermine the basic conditions of life on a wide-ranging scale. It is important to recognize that nutrient pollution of groundwater as well as surface waters has been a major concern since the rise of modern capitalist agriculture and the development of the global food regime.5 The failure to address the metabolic rupture in the soil nutrient cycle and the contradictions of capital are central to contemporary land-sea ecological rifts.

#### The alternative is a global socialist movement that ends globalization

Galant 19 [(Michael, a coordinator of the Wire Pillar of the Progressive International, former economics and trade fellow at Young Professionals in Foreign Policy, MPP from Harvard University’s Kennedy School and BA in political economy from Brown University) “The Battle of Seattle: 20 years later, it's time for a revival” Open Democracy, 11/30/2019. <https://www.opendemocracy.net/en/oureconomy/battle-seattle-20-years-later-its-time-revival/>] BC

20 years ago today, the streets of Seattle became front lines in the global class war.

Over the course of five days, some 40,000 individuals, representing unions, environmental groups, and Leftist organizations from around the world came together in an attempt to disrupt the Ministerial Conference of the World Trade Organization (WTO).

Using direct action tactics, activists physically delayed access to the meeting and led marches, rallies, and teach-ins that drew massive crowds. Protesters of all stripes were attacked by a violent police force – attracting international media coverage. The demonstrations outside became a wedge that would help drive the negotiations inside to collapse. The Battle of Seattle was won.

But the war continued. Seattle was about more than any single organization. The WTO was a symbol of the larger project of neoliberal globalization that was, in 1999, well on its way to reshaping the world in the interest of capital. The Battle of Seattle would become an equally potent symbol of resistance. The WTO protests marked the moment that the Alter-Globalization Movement (AGM), also known as the Global Justice, or disparagingly, the Anti-Globalization Movement, was launched into the public consciousness.

Much has changed in the two decades since. The AGM won many meaningful victories and experienced many more profound losses. Eventually, the movement faded. Today’s global economy resembles the neoliberal nightmare the Seattle protesters were fighting against more than the world they were fighting for. But recent years have revealed cracks in the surface. With an opportunity to finish what was started, it’s time to revive the spirit of Seattle.

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.

## 1NC – Case

### Innovation

#### Biotech industry strong now.

Cancherini et al. 4/30 [(Laura, Engagement Manager @ McKinsey & Company, Joseph Lydon, Associate Partner @ McKinsey & Company, Jorge Santos Da Silva, Senior Partner at McKinsey & Company, and Alexandra Zemp, Partner at McKinsey & Company), “What’s ahead for biotech: Another wave or low tide?“, McKinsey & Company, 4-30-2021, https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/whats-ahead-for-biotech-another-wave-or-low-tide] TDI

As the pandemic spread across the globe in early 2020, biotech leaders were initially pessimistic, reassessing their cash position and financing constraints. When McKinsey and BioCentury interviewed representatives from 106 biotech companies in May 2020,4 half of those interviewed were expecting delays in financing, and about 80 percent were tight on cash for the next two years and considering trade-offs such as deferring IPOs and acquisitions. Executives feared that valuations would decline because of lower revenue projections and concerns about clinical-trial delays, salesforce-effectiveness gaps, and other operational issues.

Belying this downbeat mood, biotech has in fact had one of its best years so far. By January 2021, venture capitalists had invested some 60 percent more than they had in January 2020, with more than $3 billion invested worldwide in January 2021 alone.5 IPO activity grew strongly: there were 19 more closures than in the same period in 2020, with an average of $150 million per raise, 17 percent more than in 2020. Other deals have also had a bumper start to 2021, with the average deal size reaching more than $500 million, up by more than 66 percent on the 2020 average (Exhibit 3).6

What about SPACs?

The analysis above does not include special-purpose acquisition companies (SPACs), which have recently become significant in IPOs in several industries. Some biotech investors we interviewed believe that SPACs represent a route to an IPO. How SPACs will evolve remains to be seen, but biotechs may be part of their story.

Fundamentals continue strong

When we asked executives and investors why the biotech sector had stayed so resilient during the worst economic crisis in decades, they cited innovation as the main reason. The number of assets transitioning to clinical phases is still rising, and further waves of innovation are on the horizon, driven by the conv

ergence of biological and technological advances.

In the present day, many biotechs, along with the wider pharmaceutical industry, are taking steps to address the COVID-19 pandemic. Together, biotechs and pharma companies have more than 250 vaccine candidates in their pipelines, along with a similar number of therapeutics. What’s more, the crisis has shone a spotlight on pharma as the public seeks to understand the roadblocks involved in delivering a vaccine at speed and the measures needed to maintain safety and efficacy standards. To that extent, the world has been living through a time of mass education in science research and development.

Biotech has also benefited from its innate financial resilience. Healthcare as a whole is less dependent on economic cycles than most other industries. Biotech is an innovator, actively identifying and addressing patients’ unmet needs. In addition, biotechs’ top-line revenues have been less affected by lockdowns than is the case in most other industries.

Another factor acting in the sector’s favor is that larger pharmaceutical companies still rely on biotechs as a source of innovation. With the top dozen pharma companies having more than $170 billion in excess reserves that could be available for spending on M&A, the prospects for further financing and deal making look promising.

For these and other reasons, many investors regard biotech as a safe haven. One interviewee felt it had benefited from a halo effect during the pandemic.

More innovation on the horizon

The investors and executives we interviewed agreed that biotech innovation continues to increase in quality and quantity despite the macroeconomic environment. Evidence can be seen in the accelerating pace of assets transitioning across the development lifecycle. When we tracked the number of assets transitioning to Phase I, Phase II, and Phase III clinical trials, we found that Phase I and Phase II assets have transitioned 50 percent faster since 2018 than between 2013 and 2018, whereas Phase III assets have maintained much the same pace. There could be many reasons for this, but it is worth noting that biotechs with Phase I and Phase II assets as their lead assets have accounted for more than half of biotech IPOs. Having an early IPO gives a biotech earlier access to capital and leaves it with more scope to concentrate on science.

Looking forward, the combination of advances in biological science and accelerating developments in technology and artificial intelligence has the potential to take innovation to a new level. A recent report from the McKinsey Global Institute analyzed the profound economic and social impact of biological innovation and found that biomolecules, biosystems, biomachines, and biocomputing could collectively produce up to 60 percent of the physical inputs to the global economy. The applications of this “Bio Revolution” range from agriculture (such as the production of nonanimal meat) to energy and materials, and from consumer goods (such as multi-omics tailored diets) to a multitude of health applications.

#### Secondary patents are key to innovation – recouping development costs and new applications of existing medicines

Richards et al 20 [(Kevin T., Associate Solicitor at the US Patent and Trademark Office, former legislative attorney at CRS, JD from UVA School of Law) “Drug Pricing and Pharmaceutical Patenting Practices,” Congressional Research Service, 2/11/2020] JL

Defenders of evergreening respond that the term is "inherently pejorative" because it creates the impression that pharmaceutical companies are exploiting the patent system.157 Defenders contend that there is nothing inherently suspect about secondary patents, which must meet the same requirements for patentability and pass through the same examination procedures as any other patent.158 Indeed, those requirements bar a secondary patent on an obvious variation of the primary patent or on another product or invention already available to the public.159 "[I]t is often the case," defenders contend, "that the value of a follow-on patent is comparable to, or even might exceed, that of a primary patent."160 One example arguably supporting this view is the drug Evista (raloxifine). Evista was "initially studied as a potential treatment for breast cancer" but, in 1997, FDA approved the drug for the prevention of osteoporosis.161 At that time, there were only a few years left on Evista's initial patent, which was filed in 1983.162 If the brand could not patent the new use (i.e., for prevention of osteoporosis), one commentator has argued that insufficient incentives would have existed to make the investment in R&D necessary to bring the drug to market.163

Defenders also argue that the ability to receive a patent on a later-developed formulation provides a significant incentive to address problems with the original formulation. For example, the original formulation of Lumigan, which is used to treat glaucoma, resulted, at times, in sufficiently severe red eye that patients would discontinue its use.164 Researchers su

bsequently developed an improved formulation with significantly decreased risk of this side effect.165 Defenders of secondary patents contend that without the possibility of patent protection, there would have been little incentive to perform this sort of research due to the significant costs involved.166

Secondary patents are also defended on the grounds of being necessary to recoup development costs. A recent study found that even though the patent term is generally twenty years, delays in PTO and FDA approval can decrease the nominal Orange Book patent term to 15.9 years, and generic competition can result in an effective market exclusivity of only 12.2 years.167 This effective market exclusivity is less than the sixteen years that one commentator suggests is necessary to recoup the brand's fixed costs for research, development, and clinical testing.168

#### High drug prices are necessary for long-term innovation that outweighs short-term costs – most comprehensive meta-analysis

Kennedy 19 [(Joseph, senior fellow at the Information Technology and Innovation Foundation, professor of Law, Economics and International Policy at Georgetown’s School of Foreign Service, Senior Principal Economist at MITRE, Inc., former Chief Economist for the Department of Commerce and Senior Counsel for the Senate Permanent Subcommittee on Investigations, PhD in economics from George Washington University) “The Link Between Drug Prices and Research on the Next Generation of Cures,” Information Technology and Innovation Foundation, 9/9/2019] JL

The justification for high prices on any particular drug therefore depends on the assumption that they are needed to fund the subsequent round of innovation. This link has been established by numerous empirical studies over the last several decades. A recent survey summarized the scholarly literature this way: “The preponderance of evidence suggests that raising reimbursements for pharmaceuticals stimulates innovation, primarily because the expected rewards for innovation go up and secondarily because the cost of financing falls for cash-constrained pharmaceutical firms.”63

Previous government reports have summarized the link between biopharmaceutical profits and innovation within the drug industry. CBO pointed to two underlying reasons why this link might be so strong.64 First, as in most industries, the introduction of successful new drugs often leads to higher profits as companies are able to capture some of the social value created by their products. The profitability of current drugs also serves as a proxy for the profitability of future drugs. If biopharmaceutical firms are allowed to make reasonably large profits from their current products, they are likely to conclude that the same will be true in the future. This may cause them to increase both the speed and amount of their research activities. Conversely, they may view current attempts to hold down prices as likely to continue into the future, in which case they may decrease research funding.

The second reason CBO identified is adequate profits generate significant cash flow, which allows companies to finance the next round of innovation.65 The availability of cash flow is important because raising significant amounts of money in the stock or bond markets is more costly. Biopharma companies have a much more detailed knowledge of disease models, the status of their current research, and the probabilities of success. Because investors cannot adequately assess these risks for themselves, they demand higher returns for investing. Assuming firms invest in R&D until their cost of capital exceeds the rate of return, financing through cash flow should allow them to justify more projects than if they have to raise the money from outside investors.

The Organization for Economic Cooperation and Development (OECD) conducted a detailed study of this issue in the pharmaceutical industry. It found that “[p]harmaceutical pricing and reimbursement policies stand to affect innovation through multiple channels, influencing both the incentives to invest in private R&D and the costs of investment. The main channel of prospective influence is the impact of pricing and reimbursement policies on the *expected return on investment* in R&D.”66 In fact the generation of large revenues is closely related to the amount of research an individual company does. Figure 9 shows R&D expenditures and sales of the 151 largest pharmaceutical firms in the world in 2006. There was clearly a very strong correlation (0.97).

Pricing policies affect not only the amount of research conducted (leading-edge or marginal improvements) but also the type and the decision of whether and when to introduce a new product to the market.

The Government Accountability Office recently completed its own review of trends in pharmaceutical profits and R&D.68 It found that both experts and academic research has concluded that high revenue potential associated with a large number of patients, or the ability to charge a high price, is an important incentive for R&D investment.69 Exclusivity periods and patent protection, tax incentives, and expedited review programs were also cited as influencing R&D. Of course, while biopharmaceutical companies, like other firms, would like to charge as high a price as possible, their ability to do so is limited by both buyers not being willing to pay more for a drug than the benefits it delivers in terms of longer, healthier lives, and the presence of at least some competition in the marketplace.

Academic studies that explore the causal link between drug revenues and research face a common difficulty in finding good data. They also take different approaches to choosing the inputs, outputs, and econometric model to measure the relationship between prices and profits, and research and innovation. So it is somewhat remarkable that, collectively, they arrive at the common answer that high prices for today’s treatments are closely associated with more research and a larger number of future drugs. There appear to be no scholarly studies that show no relationship between current prices and future innovation. Given their common conclusion that s

hort-term price declines will endanger future drug innovation, it is worthwhile to discuss some of the major studies individually.

Two studies by Duke University’s Henry Grabowski and John A. Vernon from the University of North Carolina at Chapel Hill looked at the relationship between expected returns and cash flows on the one hand, and company research on the other. The first study covered the period from 1962 to 1975.70 This followed passage of the Kefauver-Harris Amendment to the Food, Drug, and Cosmetic Act, which required a showing of efficacy as well as safety in order to get FDA approval. This increased development times by several years and R&D costs per new drug by several-fold. The authors found that research productivity, defined as sales of recent new drug introductions divided by lagged R&D spending, declined rapidly during the period. This eventually influenced cash flows, the decline of which along with the fall in research productivity together had the effect of reducing R&D.

A later study looked at research spending between 1974 and 1994 in 11 firms specializing in prescription drugs.71 Together, these firms represented just over 40 percent of the U.S. market and half of the innovative output (defined as the first 3 years’ sales of all new chemical entities introduced in a period of time). Unlike the previous period, research productivity rose over 50 percent. Grabowski and Vernon found that both expected productivity of R&D and available cash flow positively affect R&D spending. Again, the link between cash flow and research is due to the fact that internally generated funds, which are often the result of higher profits, cost less than either borrowed funds or new equity, and therefore lower the required rate of return for new research at the margin.72

In 2004, Congress asked the U.S. Department of Commerce to study the effect of pharmaceutical price controls in OECD countries.73 The department concluded that most OECD countries use a variety of controls to limit the price of patent-protected drugs in their countries. These restrictions reduced the revenue of drug companies by $18 billion to $27 billion per year. The department estimated that lower revenues reduced global R&D by $5 billion to $8 billion, or 3 to 4 new drug entities annually. This latter effect was based on outside estimates regarding the cost of developing a new drug. Note that using a lower cost of development would imply that the reduction in research spending resulted in a higher number of new drugs not being discovered. Access to these new drugs would benefit U.S. consumers by $5 billion to $7 billion a year. In contrast, OECD countries also used price floors on generic drugs in order to protect their domestic manufacturers. Eliminating these floors would save Europeans $5 billion to $30 billion annually, potentially paying for restoring a competitive market to patent drugs. The study also found that significantly more new active substances were available in the United States than in other countries, which it attributed to companies’ increased ability to capture more of the social benefit from current drugs.74

One problem with modeling the relationship between prices and research is the causation may go both ways. It is possible that better research increases profits rather than the other way around. To get at this problem, economists Daron Acemoglu and Joshua Linn examined the pharmaceutical industry using the theory of induced innovation, which says that changes in the real prices of different goods or inputs should cause companies to change the direction of innovation.75 Their 2004 study looked at changes in demographic trends between 1970 and 1990. Demographic changes affect the potential market size for a drug but they do not depend on the amount of research being done. If research spending and the size of the market move together, causation should run from prices to research.

Acemoglu and Linn divided specific drugs into categories depending on the age of the population that primarily used them. The results showed a strong relationship between market size and the entry of new drugs. As baby boomers aged over a 30-year period, the market for drugs mostly consumed by the young declined, while those used by older individuals increased. This produced a matching change in the number of new drugs in each category. A 1-percent increase in the potential market size led to a 6-percent increase in the number of new drugs entering that market. Although much of this increase came from generics, both the number of nongeneric drugs (those not identical or bioequivalent to an existing drug) and the number of new molecular compounds (drugs containing an active component that has never been approved by the FDA or marketed in the United States) increased by at least 4 percent. They also found that drug firms anticipated these demographic changes with a lead of 10 to 20 years.

Another study, by Giaccotto, Santerre, and Vernon, found a strong link between real drug prices and firm R&D.76 Their 2005 study focused on R&D intensity (the ratio of R&D spending to product sales) rather than the level of research, and found that real drug prices, real GDP per capita, and the amount of foreign sales as a percentage of total sales all had a strong impact on R&D intensity the following year. Specifically, a 10-percent increase in real prices caused firms to increase their R&D intensity by nearly 6 percent the following year. Applying this result to the past, they estimated that if drug prices had not increased in real terms between 1980 and 2001, R&D spending would have been 30 percent below its actual level. The number of new drugs entering the market during this time would have fallen by between 330 and 365, or about one-third of the actual number.

Some studies have tried to estimate the impact of future price controls on research. In 2005, economists Thomas Abbott of Thomson-Medstat and John A. Vernon found a strong impact on future innovation.77 They used the history of specific firms to look at the impact of prices on the initial decision whether to start Phase I trials on a perspective drug. With data on actual development costs, drug revenues, and a measure of the uncertainty facing firms, they found that minor price changes would have relatively little effect. A price decline of 5 to 10 percent would reduce product development by about 5 percent. But larger price declines would have a more serious impact. For example, a price cut of 40 to 45 percent in real terms would reduce the number of new development projects by 50 to 60 percent.A 2006 study by Frank Lichtenberg looks at relationships between expected market revenues on the one hand and both the number of chemotherapy regimens for treating a cancer site (i.e., skin, lungs) and the number of articles published in scientific journals pertaining to drug therapy for that cancer site.78 As the importation of drugs would decrease the U.S. price and therefore the expected revenues, Lichtenberg hypothesized that importation would cause both the number of regimens and the number of publications to fall. He started by assuming that the responsiveness of innovation to a change in revenues is at least as great as its responsiveness to the number of patients. To estimate the latter, he looked at both changes in the number of patents with particular types of cancer in Canada and the United States, and the number of regimens and research papers devoted to that type of cancer. The results showed the elasticity of the number of cancer patients to the number of chemotherapy regimens available to treat a specific type of cancer is 0.53. The elasticity of journal citations is 0.60. Therefore, a 10-percent fall in drug prices is likely to cause a 5- to 6-percent decline in both cancer regimens and research articles.

The study also looked at the relationship between the number of innovations within a company (defined as FDA-approved active ingredients contained in products sold by the company that are not contained in any other company’s products) and the number of its employees. It finds an elasticity of 0.71 across 14 pharmaceutical companies; a 10-percent reduction in new approved active ingredients would cut the number of employees by 7 percent.

In 2009, economists Abdulkadir Civan and Michael Maloney looked at both the existing drugs available to treat specific diseases and the number of new drugs in development for those same diseases.79 After correcting for the number of existing treatments available for a specific condition, they found a positive relationship between the average price of available drugs and the number of new drugs being developed. A 30-percent increase in drug prices for a given condition would increase the number of drugs in development for that condition by 25 percent. Of course, as generics enter the market in response to favorable market conditions, prices usually fall.

Economists Joseph Golec of the University of Connecticut and John A. Vernon looked at the relationship between an index of drug prices in both the United States and Europe and the profitability, research spending, and stock price of U.S. and EU pharmaceutical firms, respectively.80 Between 1993 and 2004, European price controls prevented pharmaceutical prices from rising in inflation-adjusted terms, whereas real prices in the United States rose by 50 percent. However, the authors found a statistically significant positive correlation (0.64) between changes in the price increases and R&D spending.81

Market conditions not only affected the size of research spending, it also affected its location. Looking at other sets of data, they found biopharmaceutical research in the EU countries exceeded research conducted in the United States by 24 percent in 1986. But by 2004, U.S. levels were 15 percent greater than EU levels.82 This is mostly due to EU spending stalling between 1997 and 2001, roughly the same time the two price indexes diverged. Total U.S. biopharma research by foreign firms has been growing at a faster rate than foreign research by U.S. firms, largely because U.S. prices for on-patent drugs are higher than those in Europe. Higher prices have therefore caused foreign companies to divert their attention to the U.S. market, thereby strengthening the U.S. domestic industry.

#### Resilience and countermeasures prevent spread – distinct from burnout

Adalja 16

Amesh Adalja is an infectious-disease physician at the University of Pittsburgh, The Atlantic, June 17, 2016, “Why Hasn't Disease Wiped out the Human Race?”, https://www.theatlantic.com/health/archive/2016/06/infectious-diseases-extinction/487514/

But when people ask me if I’m worried about infectious diseases, they’re often not asking about the threat to human lives; they’re asking about the threat to human life. With each outbreak of a headline-grabbing emerging infectious disease comes a fear of extinction itself. The fear envisions a large proportion of humans succumbing to infection, leaving no survivors or so few that the species can’t be sustained.

I’m not afraid of this apocalyptic scenario, but I do understand the impulse. Worry about the end is a quintessentially human trait. Thankfully, so is our resilience.

For most of mankind’s history, infectious diseases were the existential threat to humanity—and for good reason. They were quite successful at killing people: The 6th century’s Plague of Justinian knocked out an estimated 17 percent of the world’s population; the 14th century Black Death decimated a third of Europe; the 1918 influenza pandemic killed 5 percent of the world; malaria is estimated to have killed half of all humans who have ever lived.

Any yet, of course, humanity continued to flourish.

Our species’ recent explosion in lifespan is almost exclusively the result of the control of infectious diseases through sanitation, vaccination, and antimicrobial therapies. Only in the modern era, in which many infectious diseases have been tamed in the industrial world, do people have the luxury of death from cancer, heart disease, or stroke in the 8th decade of life. Childhoods are free from watching siblings and friends die from outbreaks of typhoid, scarlet fever, smallpox, measles, and the like.

#### No reason why plan incentivizes researching neglected diseases – if their disease impact uniqueness arguments are correct, they’ll focus on pandemics

### 1NC – Econ

#### Zero impact uniqueness – their healthcare spending bad argument is from 2007

#### Brennan doesn’t say pharma’s the largest cause of healthcare spending – alt causes

Smith 3/19 [(Gabrielle, Medical Care Manager in Virginia, People Keep columnist) “Seven reasons for rising healthcare costs,” People Keep, 3/19/2021] JL

1. Medical providers are paid for quantity, not quality

Most insurers—including Medicare—pay doctors, hospitals, and other medical providers under a fee-for-service system that reimburses for each test, procedure, or visit. That means the more services provided, the more fees are paid.

This encourages a high volume of redundant testing and overtreatment, including on patients that have questionable potential to improve their health.

On top of this, our medical system is not integrated. [The World Health Association](https://www.who.int/healthsystems/technical_brief_final.pdf) defines integrated health services as “the organization and management of health services so that people get the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money.”

So what does that have to do with cost? Integrated health means providers, management, and support teams are all in communication with one another on a patient’s care. On the other hand, in an unintegrated system, the lack of coordination can result in patients receiving duplicate tests and paying for more procedures than they truly need.

2. The U.S. population is growing more unhealthy

According to the [National Center for Biotechnology Information](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7077778/#:~:text=Today%2C%20chronic%20disease%20affects%2050,of%20health%20care%20costs%203.), half of the U.S. population has at least one chronic condition, such as asthma, heart disease, or diabetes, which all drive up costs. A staggering 85% of healthcare costs in the U.S. are for the care of a chronic condition.

What’s more, recent data from the [Center for Disease Control and Prevention](https://www.cdc.gov/nchs/fastats/obesity-overweight.htm) finds that over 40% of adults in the U.S. are either overweight or obese, which also leads to chronic illness and inflated medical spending.

As the U.S. population gets sicker and more overweight, the risk involved in insuring the average American goes up. And in turn, the higher the risk, the higher the cost of insurance premiums. Data from the [Kaiser Family Foundation](https://www.kff.org/report-section/ehbs-2020-summary-of-findings/attachment/figure-a-37/) (KFF) shows between 2015 and 2020 the average annual premiums for family coverage rose from $15,545 to $21,342—that’s a whopping 37%.

3. The newer the tech, the more expensive

Medical advances can improve our health and extend our life, but they also add to the cost of healthcare and the overutilization of expensive technology.

According to a study by the [*Journal of the American Medical Association*,](https://www.medschool.lsuhsc.edu/emergency_medicine/docs/overutilization.pdf) (JAMA) Americans tend to associate more advanced technology and newer procedures with better care, even if there’s little to no evidence to prove that they’re more effective.

This assumption leads to both patients and doctors often demanding the newest (read: most expensive) treatments and technology available.

4. Many Americans don’t choose their own healthcare plan

Data from the [KFF](https://www.ehealthinsurance.com/resources/small-business/how-many-americans-get-health-insurance-from-their-employer) finds that roughly 49% of the U.S. population gets their insurance through their employer. That means nearly half of Americans don’t actually make any true consumer decisions about the cost of their care or coverage, because it was already made for them by their employer.

Organizations have an incentive to purchase more expensive healthcare plans because the amount employers pay toward coverage is tax deductible for the organization and tax exempt to the employee. In addition, low deductibles or small office co-payments can encourage overuse of care, driving both demand and cost.

5. There’s a lack of information about medical care and its costs

Despite a wealth of information at our fingertips online, there’s no uniform or quick way to understand treatment options and the costs associated with them. We would never buy a car without comparing models, features, gas mileage, cost, and payment options—but yet, this is how we buy healthcare.

[Kaiser Health News](https://khn.org/news/health-care-costs/) (KHN) reports that even when evidence shows a treatment isn’t effective or is potentially harmful, it takes too long for that information to become readily known, accepted, and actually change how doctors practice or what patients demand.

And in too many cases, even when hospitals make their service prices

available, they are difficult to navigate and understand. Many of the [chargemasters](https://intermountainhealthcare.org/locations/intermountain-medical-center/hospital-information/chargemaster/shoppables/) that have been legally required to be made public are written using codes that only medical care professionals can understand.

6. Hospitals and providers are well-positioned to demand higher prices

According to the [Center for Studying Health System Change](http://www.hschange.org/CONTENT/1230/), mergers and partnerships between medical providers and insurers is one of the more prominent trends in America’s current healthcare system.

Increased provider consolidation has decreased the market competition, which normally allows for lower prices, improved productivity, and innovation. Without this competition, these near-monopolies created in some markets have both providers and insurers in a position to drive up their prices unopposed.

For example, a study done by the [*American Journal of Managed Care*](https://pubmed.ncbi.nlm.nih.gov/21756018/) found that hospitals in concentrated markets were able to charge considerably higher prices for the same procedures offered by hospitals in competitive markets. The cost for a coronary angioplasty was found to be 25% higher, while a total knee replacement was 19% higher.

7. Fear of malpractice lawsuits

Oftentimes called “defensive medicine,” some doctors will prescribe unnecessary tests or treatment out of fear of facing a lawsuit. The cost for these treatments add up over time—a study done by [JAMA](https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1904758) estimates that an annual $46 billion are wasted in defensive medicine practices.