### 1

#### The Aff’s portrayal of a world with reduced IP protections as an “information commons” where access to medicines is solved by deregulation perpetuates the neoliberal myth of increased competition ensuring 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. These private sector actors succeeded in getting most of what they wanted from a global IP agreement, which now has the status of public international law.

#### Attempts to reform the WTO are neoliberal attempts to sustain the US regime of accumulation – the contradictions of neoliberalism are why credibility is low, not IP protection

Bachand 20 [(Remi, Professor of International Law, Département des sciences juridiques, member of the Centre d’études sur le droit international et la mondialisation (CÉDIM), Université du Québec à Montréal, Canada) “What’s Behind the WTO Crisis? A Marxist Analysis” The European Journal of International Law, 8/12/2020. https://academic.oup.com/ejil/article-abstract/31/3/857/5920920?redirectedFrom=fulltext] BC

To offer our own explanation, we must recall two aspects of our theoretical framework. The first is Robert Cox’s claim113 that the function of international organizations is to ensure the creation and reproduction of hegemony. To be more accurate, they serve, if we follow his argument, to defend and to expand the ‘mode of production’ (we elected to substitute this term for the concept of ‘regime of accumulation’ that appears to be more appropriate for our means) of the dominant social classes of the dominant state. Joining this idea with the école de la régulation and social structure of accumulation theory writing114 according to which a regime of accumulation needs some regulation institutions to help resolve its contradictions (and ensure profits and capital accumulation to dominant social classes), we can conclude that the Geneva organization’s function in the US hegemonic order is to make sure that neoliberalism works well enough to provide a satisfying rate of profit for US capitalists. Going in that direction, Kristen Hopewell shows that the WTO’s creation participated in a shift in global governance from ‘embedded liberalism’ to neoliberalism115 and was slated to be an important part of that governance. Using the conceptual framework developed earlier, we can infer that the WTO was thus given a regulation function that was to ensure the operationalization of counteracting factors to the fall of the rate of profit for US capitalists. Now, as we have seen, the US rate of profit has been extremely unstable in the last two decades and Chinese expansion (and that of other ‘emerging countries’) allows one to predict that the situation could easily worsen in the future. Consequently, it should come as no surprise that the crisis that has been striking neoliberalism for the last 20 years may also result in a crisis of the organizations that are supposed to manage its contradictions, especially the WTO. Concretely, this organization seems unable to fulfil its regulatory function anymore, which is to ensure US capitalists a good rate of profit and opportunities to operationalize enough counteracting factors to negate its fall. To go further, we now need to return to Stephen Gill’s claim that the function of an international organization is to limit political and economic possibilities. It is to exclude, in other words, options that are incompatible with the social order promoted by the hegemon from what is possible and achievable.116 Effectively, the WTO was created to play such a role. Indeed, promoting liberalization of goods and services, protecting (notably intellectual) property rights and attacking subsidies (in non-agriculture sectors), just to give a few examples, all serve to severely reduce state interventions into the economy and to circumscribe or at least to strongly impede the turn towards an alternative model to neoliberalism

#### Neoliberalism rips apart communal bonds to maintain the illusion that structural inequalities are individual problems – the impact is systemic victim-blaming, poverty, and violence.

Smith 12 [(Candace, author for Societpages, cites Bruno Amable, Associate Professor of Economics at Paris School of Economics) “Neoliberalism and Individualism: Ego Leads to Interpersonal Violence?” Sociology Lens is the associated site for Sociology Compass, Wiley-Blackwell’s review journal on all fields sociological] AT

There appears to be a link between neoliberalism, individualism, and violence. In reference to the association between neoliberalism and individualism, consider neoliberalism’s insistence that we do not need society since we are all solely responsible for our personal well-being (Peters 2001; Brown 2003). From a criminological standpoint, it is not hard to understand how this focus on the individual can lead to violence. According to Hirschi’s (1969) social control theory, for instance, broken or weak social bonds free a person to engage in deviancy. Since, according to this theory, individuals are naturally self-interested, they can use the opportunity of individualization to overcome the restraining powers of society. Bearing in mind neoliberalism’s tendency to value the individual over society, it could be argued that this ideology is hazardous as it acts to tear apart important social bonds and to thereby contribute to the occurrence of ego-driven crimes, including violent interpersonal crimes. Such a thought suggests that as neoliberalism becomes more prominent in a country, it can be expected that individualism and, as a result, interpersonal violence within that country will increase. When it comes to individualization, this idea is one of the fundamental aspects of neoliberalism. In fact, Bauman (2000:34) argues that in neoliberal states “individualization is a fate, not a choice.” As Amable (2011) explains, neoliberals have realized that in order for their ideology to be successful, a state’s populace must internalize the belief that individuals are only to be rewarded based on their personal effort. With such an ego-driven focus, Scharff (2011) explains that the process of individualization engenders a climate where structural inequalities are converted into individual problems.

#### The alt is to reject the aff in favor of a critique that cultivates educated hope - evaluate the aff and alt on the level of ideological commitments – these policies won’t happen which takes out consequentialism good offense – BUT until we unlearn the assumption that getting government out of the way will let markets flourish and solve all our problems, we'll never be able to engage in robust, communitarian policymaking that truly centers human need and our obligations to others. Wilson 17:

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New Stories for New Worlds As we will see in our mapping of the neoliberal conjuncture, competition's totalizing yet tenuous power over our everyday lives is rooted in what Keating calls “status quo stories”—those stories that get told in popular culture, and that we often tell ourselves, which cement our relationship to our present conjuncture and our investment in the world as we currently know it. She explains: Generally spoken with great certainty, these and similar comments (commands, really) reflect unthinking affirmation of the existing reality and a stubborn, equally unthinking resistance to change. Because we believe that our status-quo stories represent accurate factual statements about ourselves, other people, and the world, we view them as permanent, unchanging facts. This belief in the status-quo's permanence becomes self-fulfilling: We do not try to make change because change is impossible to make. “It's always been that way,” we tell ourselves, “so why waste our energy trying to change things?” “People are just like that-it's human nature, so plan accordingly and alter your expectations! There's no point in trying to change human nature!" Status-quo stories trap us in our current circumstances and conditions; they limit our imaginations because they prevent us from envisioning alternate possibilities.10 Status-quo stories double down on reality, making it seem like those socially constructed forces impinging on us are natural rather than historical, political, and subject to change. “Status-quo stories have a numbing effect,” Keating writes. “When we organize our lives around such stories or in other ways use them as ethical roadmaps or guides, they prevent us from extending our imaginations and exploring additional possibilities."11 One of my students aptly described neoliberal culture as a “status-quo storytelling machine.” To keep us living in competition, neoliberalism generates a host of status-quo stories about the naturalness and inevitability of self-enclosed individualism. Indeed, we might say that self-enclosed individualism operates as the foundational status quo story of neoliberal culture, where competition has become synonymous with all of life. Self-enclosed individualism keeps us not only divided from one another, but also actively pitted against each other. We are stuck in an oppositional consciousness that refuses to acknowledge our social interconnections, even though, as our shared anxieties suggest, we've never had more in common than right now! No matter where we are or what we're doing, neoliberal culture encourages us to see each other through a competitive lens that makes the transformation of our social world, and ourselves, impossible. We become incapable of acknowledging how our fortunes and fates are entwined with those of others who are living very different realities. We become callous and hardened to the suffering of others. We see suffering and death everywhere, and while this might register as bad or wrong or upsetting, we nonetheless stay stuck within the horizons of our own self-enclosed bubbles. The devastating powers of status-quo stories are clear in so many of the conversations we have on college campuses about power, privilege, and difference. In fact, I started teaching courses on neoliberal culture to help my students understand the broader histories and contexts that were impinging on these conversations and making them so fraught, and ultimately so unproductive. Time and time again, in open community forums and classroom discussions of systemic inequalities, I watched students voice painful personal experiences only to get nowhere. Indeed, when asked to consider various forms of privilege, many of my white, male students get defensive. The idea that they haven't earned their place through their own decisions and hard work, but rather benefited from inherited wealth and opportunity, means that they are not good people from the perspective of neoliberalism. Talking about issues of privilege threatens to diminish their sense of self and individual value, so they recoil from conversations that ask them to see their place within broader legacies of settler colonialism, patriarchy, and capitalism. Accordingly, they hold on tight to status-quo stories of self-enclosed individualism to protect themselves, doubling down on their privilege to secure their status in a competitive world. However, it is important to see that status-quo stories of self- enclosed individualism also inform my students from historically oppressed and marginalized groups. These students suffer daily: they live in an environment that professes to celebrate “diversity,” while, in the context of their own lives, they are reminded again and again just how much they don't belong or matter. Not surprisingly, they demand “safe spaces” and protection for themselves and their peers, and they often draw hard lines between allies and enemies. Here too though, we see neoliberal stories at work. What matters for my students, and rightly so, is the way that “microaggressions”—those daily, mundane experiences of discrimination that accumulate over time-diminish their own capacities for flourishing as self-enclosed individuals. My point here is not to suggest that privileged students and marginalized students are the same because they are both invested in a version of self-enclosed individualism. Rather, my point is they share a situation; despite their different and unequal social positions, they have similar feelings-of defensiveness and a fear of failure—and status-quo stories in common. These commonalities do not imply evenness or equality, but rather interconnection, that is, a shared conjuncture. It is the recognition of this conjunctural interconnection that can thread our lives together and open up possibilities for more egalitarian futures. However, living in competition and the oppositional consciousness it demands obscure these commonalities and the interconnections that could bring students into new relations with one another. As a result, we stay caught up in the world as we know it. We stay stuck in competition, even though we all are yearning for different worlds. We desperately need new stories, stories that offer us different pathways to each other. As Keating puts it, we need stories that help us move from “me” to “we” consciousness.12 However, this book is not going to write these new stories for you. Rather, the goal of this book is to provide you with the resources for writing these new stories in and through your own lives. The Work of Critique Ultimately, writing new stories will require a new sense of yourself and your world, as well as what is possible, and realizing this new sense will require, first and foremost, cultivating a deeply critical orientation toward the world as we currently know and experience it. This critical orientation dislodges the sense of inevitability of neoliberalism, self-enclosed individualism, and living in competition; it knows that things don't have to be this way and, thus, senses the possibilities for resistance and transformation that are everywhere. It is so crucial to understand that this critical orientation is not simply about saying that aspects of neoliberal culture are “bad” or "wrong.” Rather, the work of critique is about seeing the flows of power and ways of thinking that make the neoliberal conjuncture possible and hold it together. Critique is therefore a mode of knowing—a form of everyday intellectual work—that is aimed at exposing the myriad workings of power and its status-quo stories. As Michel Foucault explains, “A critique is not a matter of saying that things are not right as they are. It is a matter of pointing out on what kinds of assumptions, what kinds of familiar, unchallenged, unconsidered modes of thought the practices that we accept rest.”13 To clarify Foucault's idea, let's think back to the student discussions of power and privilege discussed above. The work of critique is not simply about pointing out privilege, although this is, of course, vital work. The work of critique goes beyond pointing out what's wrong and seeks to unravel the socially constructed conjuncture in which these problems emerge and get negotiated. For only then can we step outside of the competitive, oppositional consciousness of neoliberal culture and begin to imagine a radically different future built on equality and shared security. This work of dislodging the inevitability of our conjuncture and its status-quo stories is hard but vital intellectual work that requires not only critique of our social world, but also transformation of ourselves. Indeed, truly critical work is always profoundly disruptive of our own identities and knowledges. This work can be immensely painful, as it strips away the certainty and comfort provided by status-quo stories. This work can also be, and should be, immensely joyful and life-giving, as it enables us to free ourselves from the status-quo stories and devastating limitations they put on our lives, imaginations, and social relationships. This mix of pain and joy at the heart of critical work comes from the way that critique asks us to “lose confidence” in our world. As feminist theorist Sara Ahmed writes, Losing confidence: it can be a feeling of something gradually going away from you, being eroded. You sense the erosion. You might stumble, hesitate, falter; things might gradually unravel so you end up holding onto the barest of threads. It might be an experience in the present that throws things up, throws you off balance.... When you lose confidence it can feel like you are losing yourself: like you have gone into hiding from yourself.4 Losing confidence in your world is thus a form of existential crisis —you are disoriented; your world is shattered. At the same time, losing confidence in status-quo stories means gaining confidence for resistance and transformation. We become bolder, less anxious, more optimistic, capable of social interconnection, political intervention, and acting on and from a place of commonality. This is real freedom. Critique is ultimately about unlearning our world so that we might reconstruct it anew. Losing confidence in neoliberal culture means being able to say no to it in the conduct of our daily lives. In these capacities for resistance, we gain confidence that another world might actually be better, worth opening ourselves up to, worth fighting for. We begin to cultivate what Henry Giroux calls educated hope. Educated hope is not “a romanticized and empty” version of hope; rather, it is a form of hope enabled by critique that “taps into our deepest experiences and longing for a life of dignity with others, a life in which it becomes possible to imagine a future that does not mimic the present.” With educated hope, our sense of who we are and of what might be possible shifts in profound ways. This is when those new worlds we are longing for open up. What’s to Come Each of the chapters that follow offer a variety of intellectual tools for mapping the neoliberal conjuncture. Taken together, they are designed to produce a holistic and thick understanding of neoliberalism and its myriad powers to shape our identities, sensibilities, social worlds, and political horizons. Having a thick understanding of neoliberalism means that you feel in your bones that there is nothing natural or inevitable about neoliberalism and its status-quo stories. It means that you understand that neoliberalism is the outcome of a range of contingent historical processes that have consequences across social, political, economic, and cultural fields. In other words, by the end of our journey, you'll know how our neoliberal conjuncture has been, and continues to be, constructed. You'll also, therefore, be able to sense the other worlds on the horizon that are just waiting to be constructed, so long as, together, we can develop the resources, capacities, and stories of interconnection for bringing them into being. More specifically, the book is divided into two sections. The first section, titled “Critical Foundations,” focuses on cultivating a broad, critical orientation toward neoliberal culture. The first chapter charts the rise of neoliberal hegemony through four historical phases. The goal is to illustrate exactly how competition came to be the driving cultural force in our everyday lives. As we will see, there is nothing natural or inevitable about neoliberalism. It was a political and class-based project to remake capitalism and liberal democracy that was conceived, organized for, and eventually won. In the second chapter, we delve into the world of neoliberal theory and its critical consequences. Here we'll explore exactly what neoliberal thinkers believe about the state, markets, and human actors, and what distinguishes neoliberalism from earlier schools of liberal thought. We'll also interrogate what I call the four Ds—disposability, dispossession, disimagination, and de- democratization—which, taken together, enable us to clearly see and articulate what is so devastating about the rise of neoliberalism. The third chapter examines the cultural powers specific to neoliberalism. Neoliberalism advances through culture, specifically through the promotion of an enterprise culture that works to impose competition as a norm across all arenas of social life. In order to see and specify how neoliberalism works through culture, we take contemporary education as a case study and unpack the entangled cultural powers of neoliberal governmentality, affect, and ideology. The second section is titled “Neoliberal Culture.” In these chapters, we explore the worlds of neoliberal labor, affect, and politics respectively, tracing what happens when our everyday lives as workers, individuals, and citizens become organized around living in competition. The fourth chapter examines how neoliberalism turns everyday life into a “hustle,” where all the contexts of daily life become animated by the demands of neoliberal labor. At stake here are the ways in which we are all hustling to get by, yet we stay radically divided from one another along lines of gender, race, and class thanks to the norm of self- enterprise. The next chapter hones in on what it feels like to inhabit enterprise culture by exploring neoliberal affect and the care of the self. As we already know, living in competition breeds widespread anxiety, not to mention depression and illness, making self-care an ongoing, pressing problem of everyday life. While neoliberal culture offers us plenty of tools for self-care that ultimately keep us stuck in our self-enclosed individualism, this chapter also considers how self-care might be a site for resistance and political intervention. The final chapter focuses on neoliberal politics, tracing what happens to citizenship and social action in our contemporary conjuncture. As we'll see, neoliberalism privatizes our political horizons by remaking democracy into a market competition for visibility and equality. Throughout this mapping of the neoliberal conjuncture, we will engage in a mode of critical work that will, hopefully, enable you to unlearn neoliberalism and thus begin to write new stories about our conjuncture—including both our commonalities and differences—and the alternative worlds we are yearning for. Indeed, our critical work will only matter to the extent that it opens up our individual and collective horizons to a future beyond living in competition.

### 2

#### Counterplan text: The member nations of the World Trade Organization ought to increase Covax support, prioritise trade facilitation, commit to aid for trade, and invest in preparedness.

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Vaccine inequity is one of the most striking — but solvable — challenges of the [COVID-19](https://www.devex.com/focus/covid-19) pandemic. It also provides a wake-up call for what can happen when so-called least-developed countries, or LDCs, are not able to participate fully in global trading systems. By supporting programs such as COVAX, advancing trade facilitation efforts, and directing more aid toward trade initiatives such as [Aid for Trade](https://www.wto.org/english/tratop_e/devel_e/a4t_e/aid4trade_e.htm), the global community can help right this imbalance. As of Monday, only [1.1 % of people in low-income countries](https://ourworldindata.org/covid-vaccinations) had received at least one COVID-19 vaccine dose. This is making it harder to battle a third wave of infections, as the highly transmissible [delta variant](https://news.un.org/en/story/2021/07/1095152) spreads across many nations. In the [World Health Organization](https://www.devex.com/organizations/world-health-organization-who-30562)’s Africa region — where a [high number](https://www.uneca.org/sites/default/files/com/2021/E2100045-English-CoM21-Progress-in-the-implementation-of-the-priority-areas-of-the-Programme-of-Action-for-the-Least-Developed-Countries-for-the-Decade-2011-2020_Istanbul-Programme-of-Action.pdf) of LDCs are located — COVID-19 fatalities [surged 44.2%](https://apps.who.int/iris/bitstream/handle/10665/342715/OEW28-0511072021.pdf) over one week in July. The coronavirus is [devastating](https://www.un.org/development/desa/dpad/2021/major-study-on-covid-19-impact-on-ldcs-released/) many LDCs’ already fragile economies and causing poverty and inequality to rise. Without equitable access to vaccines, [global economic recovery cannot be sustained](https://www.wto.org/english/news_e/news21_e/gc_05may21_e.htm) and progress toward the Sustainable Development Goals will be derailed. While trade alone cannot eradicate vaccine unequity or its negative consequences for the [economy](https://news.un.org/en/story/2021/05/1091732) and [vulnerable groups](https://observatoryihr.org/news/covid-19-vaccine-distribution-highlights-social-inequality/), it has a powerful contribution to make. Here are four actions that would make an impact:

1. Increase COVAX support

Vaccine equity can only be achieved if the global community eschews vaccine nationalism. High-resource countries should [ramp up donations](https://www.devex.com/news/wto-chief-to-g-20-donate-2-3b-more-covid-19-vaccine-doses-100306) through the vaccine-sharing initiative COVAX and commit to securing a swift, workable resolution to ongoing debates around [technology transfers and intellectual property waivers](https://www.devex.com/news/wto-council-offers-hope-for-trips-vaccine-proposal-100125). While countries in the G-7 group of nations have [pledged to increase their support](https://www.who.int/news/item/13-06-2021-g7-announces-pledges-of-870-million-covid-19-vaccine-doses-of-which-at-least-half-to-be-delivered-by-the-end-of-2021) for COVAX, the initiative has faced hurdles in the form of [supply bottlenecks](https://www.devex.com/news/india-crisis-puts-covax-150-million-doses-behind-schedule-99860), [export restrictions](https://unctad.org/news/export-restrictions-do-not-help-fight-covid-19), and [logistical weaknesses](https://www.devex.com/news/the-cold-chain-storage-challenge-99869). Many currently available COVID-19 vaccines have short shelf lives and must be stored at low temperatures. LDCs can only benefit from donated doses if they have fast and efficient processing at their borders, modern transportation systems, and access to cold chain infrastructure.

2. Prioritize trade facilitation

Accelerating implementation of the [World Trade Organization](https://www.devex.com/organizations/world-trade-organization-wto-44694)’s 2017 [Trade Facilitation Agreement](https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm) is critical for helping LDCs overcome these challenges. A total of [154 WTO members](https://www.tfafacility.org/ratifications) now support the agreement, which pledges investment in the simplification and modernization of the movement, release, and customs clearance of goods globally. It also aims to help low-income countries overcome these same barriers through technical assistance and capacity building. The [Global Alliance for Trade Facilitation](https://www.devex.com/organizations/global-alliance-for-trade-facilitation-102992) has made good progress in identifying barriers to vaccine equity and introducing solutions. In [Mozambique](https://www.tradefacilitation.org/article/two-new-mozambique-projects-aim-to-ease-access-to-vaccines-medical-products/), for example, the alliance is working to digitalize pre-shipment authorization for vaccine imports — a process that can take as long as two weeks, during which vaccine doses must be kept in storage. This digitalization should help Mozambique decrease wait times, improve shipment traceability, and reduce storage and inventory management costs. Yet more work remains to help governments overcome [challenges associated with implementing](https://www.wto-ilibrary.org/trade-facilitation-and-customs-valuation/world-trade-report-2015_f2985d96-en) the Trade Facilitation Agreement, such as changing domestic legislation and involving the private sector. Lower-income countries and LDCs have flagged a need around human resources and training, legal assistance, and the acquisition of information and communication technologies.

3. Commit to Aid for Trade

For LDCs to participate fairly in global vaccine supply chains — as importers or exporters of inputs and finished products — they need financial and technical assistance to strengthen their [productive capacity](https://www.devex.com/news/cepi-ceo-concerted-effort-needed-to-build-lmic-vaccine-manufacturing-100013), streamline their cross-border standards and processes, and improve their logistics infrastructure and [technological know-how](https://www.wto.org/english/news_e/news21_e/dgno_21may21_e.htm). The Aid for Trade initiative exists to provide that support — but can only deliver if donor countries maintain or increase their official development assistance, or ODA. Preliminary figures from the [Organisation for Economic Co-operation and Development](https://www.devex.com/organizations/organisation-for-economic-co-operation-and-development-oecd-29872) show that [Development Assistance Committee](https://www.devex.com/organizations/development-assistance-committee-dac-100607) members [expanded their ODA by $10 billion](https://www.devex.com/news/what-to-make-of-the-2020-dac-stats-99641) between 2019 and 2020, mostly as part of their COVID-19 response. However, with several government donors having reprogrammed their aid budgets to focus on immediate health priorities, [fears are growing](https://www.weforum.org/agenda/2021/01/helping-small-businesses-build-resilience/) that their overall ODA may also be slashed — and, with this, their support for Aid for Trade. The generosity of some countries provides hope. Norway, for example, recently stepped up to help plug such gaps with [45 million Norwegian kroner](https://www.wto.org/english/news_e/news21_e/if_22jun21_e.htm) of additional funding for the WTO-backed [Enhanced Integrated Framework](https://www.devex.com/organizations/enhanced-integrated-framework-eif-78046), a global Aid for Trade program that aims to reduce poverty.

4. Invest in preparedness

In 2019, only [$374 million](http://www.healthdata.org/sites/default/files/files/policy_report/FGH/2020/FGH_2019_Interior_Final_Online_2020.09.18.pdf) — or less than 1% — of the world’s total development assistance for health was spent on pandemic preparedness. Within months, the consequences of that underinvestment became clear. Integrating lower-income countries and LDCs into global and regional [pharmaceutical value chains](https://unctad.org/news/unctad-report-says-least-developed-countries-position-improve-access-medicines-through-local-0) is vital for ensuring the world is better prepared next time. Directing increased aid to help these countries become [producers and exporters](https://www.bloomberg.com/news/articles/2021-07-26/africa-must-build-vaccine-production-capacity-wto-chief-says) of medical equipment and vaccines has never been more needed. LDCs would not only receive more of the [vaccines and therapeutics they need now](https://trade4devnews.enhancedif.org/en/op-ed/access-denied-ensuring-vaccines-worlds-poorest-countries) but could actively contribute to the global response when the next pandemic inevitably hits.

#### A waiver for Covid takes too long---only the CP solves. Fabricius 6/25

Peter Fabricius [institute for security services consultant], 6/20 - ("South Africa: Is Ramaphosa Tripping Over a TRIPS Waiver?," allAfrica, 6/25/2021, accessed 6-30-2021, https://allafrica.com/stories/202106260001.html)//ML

His fervour is prompting some suspicion that the waiver campaign is an ideological issue for South Africa and others on the left - who have always been suspicious of big pharma - rather than an objective solution to a crisis. That's because a TRIPS waiver cannot possibly rescue Africa from the immediate grips of the pandemic.¶ Even the mRNA project in South Africa would take at least around 12 months before manufacture can begin, WHO Chief Scientist Soumya Swaminathan said. And this would be with voluntary licensing and full technological cooperation and training from the patents' owners. Manufacturing vaccines from scratch and without that cooperation through a TRIPS waiver would take much longer.¶ The only immediate remedy is a vigorous campaign to pressure rich countries to donate vaccines¶ Yogesh Pai, Assistant Professor at the National Law University in Delhi, said the TRIPS waiver proposal was 'simplistic' in assuming that allowing the formulae of companies making vaccines to be copied would automatically enable other manufacturers to produce COVID-19 vaccines quickly.¶ Pai said most complex technologies, such as vaccines, comprised not only the knowledge, which is patented to prevent copying. It also involved undisclosed information and know-how about quality control measures for production and clinical data required for regulatory clearances.¶ An intellectual property waiver wouldn't give another company access to this deeper level of know-how. Only a cooperative agreement in which the technology owner helped the new manufacturer produce the vaccines could do this, Pai suggested.¶ Prashant Yadav, an expert on medical supply chains at Harvard Medical School, told ISS Today that it would probably take two to three years to produce a vaccine via a TRIPS waiver. First, the waiver would need to be secured, and then the necessary processes worked out without the help of the original developer.¶ Can Africa wait that long? At the launch of the mRNA project this week, Michael Ryan, Head of the WHO's Health Emergencies Programme, stressed that manufacturing COVID-19 vaccines in Africa, while commendable, wouldn't address the immediate crisis. The only solution was for rich countries to stop hoarding vaccines immediately. 'It will be a catastrophic moral failure at global level if we do not do that,' Ryan warned.¶ Yadav says the urgent strategy should be reallocating doses purchased by countries that don't need them and expanding vaccine production through voluntary licensing and tech transfer from the originator companies.¶ Of course, Ramaphosa could be right in suspecting that rich countries aren't altruistic enough to donate their 'surplus' vaccines, and so Africa and the rest of the global south must become more self-reliant.

#### And it competes off the net benefit: the perm wouldn’t solve because it would still link to the Innovation DA.

### 3

#### The pharma industry is strong now but patents are key for continued economic growth. Batell and PhRMA 14:

Batell and PhRMA {Battelle is the world’s largest nonprofit independent research and development organization, providing innovative solutions to the world’s most pressing needs through its four global businesses: Laboratory Management, National Security, Energy, Environment and Material Sciences, and Health and Life Sciences. The Pharmaceutical Research and Manufacturers of America (PhRMA) represents the country’s leading pharmaceutical research and biotechnology companies, which are devoted to inventing medicines that allow patients to live longer, healthier, and more productive lives.}, 14 – “The U.S. Biopharmaceutical Industry: Perspectives on Future Growth and The Factors That Will Drive It,” http://phrma-docs.phrma.org/sites/default/files/pdf/2014-economic-futures-report.pdf//marlborough-wr//

Compared to other capital-intensive, advanced manufacturing industries in the U.S., the biopharmaceutical industry is a leader in R&D investment, IP generation, venture capital investment, and R&D employment. Policies and infrastructure that helped foster these innovative activities have allowed the U.S. to seize global leadership in biopharmaceutical R&D over the past 30 years. However, as this report details, other countries are seeking to compete with the U.S. by borrowing and building upon some of these pro-innovation policies to improve their own operating environment and become more favorable to biopharmaceutical companies making decisions about where to locate their R&D and manufacturing activities. A unique contribution of this report was the inclusion of the perspective of senior-level strategic planning executives of biopharmaceutical companies regarding what policy areas they see as most likely to impact the favorability of the U.S. business operating environment. The executives cited the following factors as having the most impact on the favorability of the operating environment and hence, potential growth of the innovative biopharmaceutical industry in the U.S.: • Coverage and payment policies that support and encourage medical innovation • A well-functioning, science-based regulatory system • Strong IP protection and enforcement in the U.S. and abroad The top sub-attribute identified as driving future biopharmaceutical industry growth in the U.S. cited by executives was a domestic IP system that provides adequate patent rights and data protection. Collectively, these factors underscore the need to reduce uncertainties and ensure adequate incentives for the lengthy, costly, and risky R&D investments necessary to develop new treatments needed by patients and society to address our most costly and challenging diseases. With more than 300,000 jobs at stake between the two scenarios, the continued growth and leadership of the U.S. innovative biopharmaceutical industry cannot be taken for granted. Continued innovation is fundamental to U.S. economic well-being and the nation’s ability to compete effectively in a globalized economy and to take advantage of the expected growth in demand for new medicines around the world. Just as other countries have drawn lessons from the growth of the U.S. biopharmaceutical sector, the U.S. needs to assess how it can improve the environment for innovation and continue to boost job creation by increasing R&D investment, fostering a robust talent pool, enhancing economic growth and sustainability, and continuing to bring new medicines to patients.

#### Weakening patents eliminates funds for R&D and halts pharma innovations that prevents an effective development of a right to health.

Sarah Joseph 11, Professor of Human Rights Law, and the Director of the Castan Centre for Human Rights Law at Monash University, Sarah, “Blame it on the WTO?” http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199565894.001.0001/acprof-9780199565894-chapter-8#acprof-9780199565894-note-1350

IP protection restricts trade and competition, so IP clauses are somewhat anomalous in trade agreements, which are normally designed to decrease trade barriers. What is the justification for IP protection?44 Due to their relevance to this chapter, I will concentrate on arguments in favour of patents.45 Patents reward people for their inventions, thus encouraging creativity and innovation. Patents operate on the assumption that people are not inherently altruistic, and expect rewards for their endeavours, especially when those endeavours are risky as they may, and often do, result in costly failure.46 Furthermore, the money raised from patent protection is said to be necessary to fund the considerable costs of research and development (R&D).47 Therefore, without patents, innovation in the pharmaceutical field (or any industrial field) might grind to a standstill. While it is true that the high prices generated by patent protection may render access to drugs selective, (p.221) it is nevertheless better that a drug is available to some rather than non-existent and available to no one. The global extension of patent law mandated by TRIPS helps to ensure that patents are not undermined by the sale of competing pirated copies. Furthermore, global IP regimes should theoretically encourage greater technology transfer between countries, greater foreign direct investment, and greater local innovation within compliant states.48 All of these outcomes should accelerate the economic development of poor countries, with positive knock-on effects for human rights. Thus, perhaps it is arguable that pharmaceutical patents are justifiable under international human rights law, as they promote R&D which is essential for the future enhancement of rights to life and health. Furthermore, to the extent that they are held by natural persons, they are one way of protecting that person’s rights under Article 15(1)(c) of the ICESCR.

#### Pharmaceutical innovation is key to protecting against future pandemics, bioterrorism, and antibiotic resistance.

Marjanovic and Fejiao ‘20 Marjanovic, Sonja, and Carolina Feijao. Sonja Marjanovic, Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitive biology, Imperial College London; B.Sc. in biology, University of Lisbon. "Pharmaceutical Innovation for Infectious Disease Management: From Troubleshooting to Sustainable Models of Engagement." (2020). [Quality Control]

As key actors in the healthcare innovation landscape, pharmaceutical and life sci-ences companies have been called on to develop medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also infectious diseases that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a **bioterrorism con-text**.1 The general threat to public health that is posed by **antimicrobial resistance** is also **well-recognised** as an area **in need of pharmaceutical innovation**. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and compe-tition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an **indispensable** partner in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceu-tical innovation

in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is **essential** for socially responsible companies in the sec-tor.2 It is therefore unsurprising that we are seeing indus-try-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently contributing in a variety of ways. Examples include pharmaceutical companies donating existing com-pounds to assess their utility in the fight against COVID-19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating tri-als for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accel-erate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The primary purpose of such innovation is to **benefit patients** and wider **population health**. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be rela-tively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pres-sure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing com-bination product that is being tested for therapeutic poten-tial against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider how pharmaceutical innovation for responding to emerging infectious diseases can best be enabled beyond the current crisis. Many public health threats (including those associated with other **infectious diseases**, **bioterror-ism** agents **and antimicrobial resistance**) are **urgently in need of pharmaceutical innovation**, **even if their impacts are not as visible** to society **as COVID**-19 is in the imme-diate term. The pharmaceutical industry has responded to previous public health emergencies associated with infec-tious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contribu-tions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still **low**.12 There are important policy questions as to whether – and how – industry could engage with such public health threats to an even greater extent under improved innova-tion conditions.

#### Bioterror causes extinction---quick innovation key

Farmer 17 (“Bioterrorism could kill more people than nuclear war, Bill Gates to warn world leaders” http://www.telegraph.co.uk/news/2017/02/17/biological-terrorism-could-kill-people-nuclear-attacks-bill/)

Bioterrorists could one day kill hundreds of millions of people in an attack more deadly than nuclear war, Bill Gates will warn world leaders. Rapid advances in genetic engineering have opened the door for small terrorism groups to tailor and easily turn biological viruses into weapons. A resulting disease pandemic is currently one of the most deadly threats faced by the world, he believes, yet governments are complacent about the scale of the risk. Speaking ahead of an address to the Munich Security Conference, the richest man in the world said that while governments are concerned with the proliferation of nuclear and chemical weapons, they are overlooking the threat of biological warfare. Mr Gates, whose charitable foundationis funding research into quickly spotting outbreaks and speeding up vaccine production, said the defence and security establishment “have not been following biology and I’m here to bring them a little bit of bad news”. Mr Gates will today (Saturday) tell an audience of international leaders and senior officers that the world’s next deadly pandemic “could originate on the computer screen of a terrorist”. He told the Telegraph: “Natural epidemics can be extremely large. Intentionally caused epidemics, bioterrorism, would be the largest of all. “With nuclear weapons, you’d think you would probably stop after killing 100million. Smallpox won’t stop. Because the population is naïve, and there are no real preparations. That, if it got out and spread, would be a larger number.” He said developments in genetic engineering were proceeding at a “mind-blowing rate”. Biological warfare ambitions once limited to a handful of nation states are now open to small groups with limited resources and skills. He said: “They make it much easier for a non-state person. It doesn’t take much biology expertise nowadays to assemble a smallpox virus. Biology is making it way easier to create these things.” The increasingly common use of gene editing technology would make it difficult to spot any potential terrorist conspiracy. Technologies which have made it easy to read DNA sequences and tinker with them to rewrite or tweak genes have many legitimate uses. He said: “It’s not like when someone says, ‘Hey I’d like some Plutonium’ and you start saying ‘Hmmm.. I wonder why he wants Plutonium?’” Mr Gates said the potential death toll from a disease outbreak could be higher than other threats such as climate change or nuclear war. He said: “This is like earthquakes, you should think in order of magnitudes. If you can kill 10 people that’s a one, 100 people that’s a two... Bioterrorism is the thing that can give you not just sixes, but sevens, eights and nines. “With nuclear war, once you have got a six, or a seven, or eight, you’d think it would probably stop. [With bioterrorism] it’s just unbounded if you are not there to stop the spread of it.” By tailoring the genes of a virus, it would be possible to manipulate its ability to spread and its ability to harm people. Mr Gates said one of the most potentially deadly outbreaks could involve the humble flu virus. It would be relatively easy to engineer a new flu strain combining qualities from varieties that spread like wildfire with varieties that were deadly. The last time that happened naturally was the 1918 Spanish Influenza pandemic, which went on to kill more than 50 million people – or nearly three times the death toll from the First World War. By comparison, the recent Ebola outbreak in West Africa which killed just over 11,000 was “a Richter Scale three, it’s a nothing,” he said. But despite the potential, the founder of Microsoft said that world leaders and their militaries could not see beyond the more recognised risks. He said: “Should the world be serious about this? It is somewhat serious about normal classic warfare and nuclear warfare, but today it is not very serious about bio-defence or natural epidemics.” He went on: “They do tend to say ‘How easy is it to get fissile material and how accurate are the plans out on the internet for dirty bombs, plutonium bombs and hydrogen bombs?’ “They have some people that do that. What I am suggesting is that the number of people that look at bio-defence is worth increasing.” Whether naturally occurring, or deliberately started, it is almost certain that a highly lethal global pandemic will occur within our lifetimes, he believes. But the good news for those contemplating the potential damage is that the same biotechnology can prevent epidemics spreading out of control. Mr Gates will say in his speech that most of the things needed to protect against a naturally occurring pandemic are the same things needed to prepare for an intentional biological attack. Nations must amass an arsenal of new weapons to fight such a disease outbreak, including vaccines, drugs and diagnostic techniques. Being able to develop a vaccine as soon as possible against a new outbreak is particularly important and could save huge numbers of lives, scientists working at his foundation believe.

# CASE

### Framing

#### The standard is consistency with utilitarianism

#### 1] Preventing extinction is the most ethical outcome

Bostrom 13 (Nick, Professor at Oxford University, Faculty of Philosophy & Oxford Martin School, Director, Future of Humanity Institute, Director, Oxford Martin Programme on the Impacts of Future Technology University of Oxford, “Existential Risk Prevention as Global Priority”, Global Policy Volume 4, Issue 1, February 2013 // AKONG)

Some other ethical perspectives We have thus far considered existential risk from the perspective of utilitarianism (combined with several simplify- ing assumptions). We may briefly consider how the issue might appear when viewed through the lenses of some other ethical outlooks. For example, the philosopher Robert Adams outlines a different view on these matters: I believe a better basis for ethical theory in this area can be found in quite a different direction—in a commitment to the future of human- ity as a vast project, or network of overlapping projects, that is generally shared by the human race. The aspiration for a better society—more just, more rewarding, and more peaceful—is a part of this project. So are the potentially end- less quests for scientific knowledge and philo- sophical understanding, and the development of artistic and other cultural traditions. This includes the particular cultural traditions to which we belong, in all their accidental historic and ethnic diversity. It also includes our interest in the lives of our children and grandchildren, and the hope that they will be able, in turn, to have the lives of their children and grandchil- dren as projects. To the extent that a policy or practice seems likely to be favorable or unfavor- able to the carrying out of this complex of pro- jects in the nearer or further future, we have reason to pursue or avoid it. ... Continuity is as important to our commitment to the project of the future of humanity as it is to our commit- ment to the projects of our own personal futures. Just as the shape of my whole life, and its connection with my present and past, have an interest that goes beyond that of any iso- lated experience, so too the shape of human history over an extended period of the future, and its connection with the human present and past, have an interest that goes beyond that of the (total or average) quality of life of a popula- tion-at-a-time, considered in isolation from how it got that way. We owe, I think, some loyalty to this project of the human future. We also owe it a respect that we would owe it even if we were not of the human race ourselves, but beings from another planet who had some understanding of it (Adams, 1989, pp. 472–473). Since an existential catastrophe would either put an end to the project of the future of humanity or drasti- cally curtail its scope for development, we would seem to have a strong prima facie reason to avoid it, in Adams’ view. We also note that an existential catastrophe would entail the frustration of many strong preferences, sug- gesting that from a preference-satisfactionist perspective it would be a bad thing. In a similar vein, an ethical view emphasising that public policy should be determined through informed democratic deliberation by all stake- holders would favour existential-risk mitigation if we suppose, as is plausible, that a majority of the world’s population would come to favour such policies upon reasonable deliberation (even if hypothetical future peo- ple are not included as stakeholders). We might also have custodial duties to preserve the inheritance of humanity passed on to us by our ancestors and convey it safely to our descendants.23 We do not want to be the failing link in the chain of generations, and we ought not to delete or abandon the great epic of human civili- sation that humankind has been working on for thou- sands of years, when it is clear that the narrative is far from having reached a natural terminus. Further, many theological perspectives deplore naturalistic existential catastrophes, especially ones induced by human activi- ties: If God created the world and the human species, one would imagine that He might be displeased if we took it upon ourselves to smash His masterpiece (or if, through our negligence or hubris, we allowed it to come to irreparable harm).24 We might also consider the issue from a less theoreti- cal standpoint and try to form an evaluation instead by considering analogous cases about which we have defi- nite moral intuitions. Thus, for example, if we feel confident that committing a small genocide is wrong, and that committing a large genocide is no less wrong, we might conjecture that committing omnicide is also wrong.25 And if we believe we have some moral reason to prevent natural catastrophes that would kill a small number of people, and a stronger moral reason to pre- vent natural catastrophes that would kill a larger number of people, we might conjecture that we have an even stronger moral reason to prevent catastrophes that would kill the entire human population.

#### 2] No intent-foresight distinction – If we foresee a consequence, then it becomes part of our deliberation which makes it intrinsic to our action since we intend it to happen.

#### 3] Actor specificity – Util is the only moral system available to policymakers. Just because the government uses Kant right now doesn’t mean they should. Goodin 95

Robert E. Goodin 95 [professor of government at the University of Essex, and professor of philosophy and social and political theory at Australian National University], “Utilitarianism as a Public Philosophy”, Cambridge Studies in Philosophy and Public Policy, May 1995, BE

Consider, first, the argument from necessity. Public officials are obliged to make their choices under uncertainty, and uncertainty of a very special sort at that. All choices - public and private alike - are made under some degree of uncertainty, of course. But in the nature of things, private individuals will usually have more complete information on the peculiarities of their own circumstances and on the ramifications that alternative possible choices might have for them. Public officials, in contrast, are relatively poorly informed as to the effects that their choices will have on individuals, one by one. What they typically do know are generalities: averages and aggregates. They know what will happen most often to most people as a result of their various possible choices. But that is all. That is enough to allow public policy-makers to use the utilitarian calculus - if they want to use it at all - to choose general rules of conduct. Knowing aggregates and averages, they can proceed to calculate the utility payoffs from adopting each alternative possible general rule. But they cannot be sure what the payoff will be to any given individual or on any particular occasion. Their knowledge of gener- alities, aggregates and averages is just not sufficiently fine-grained for that.

#### 3] Pleasure and pain are intrinsically valuable.

Moen 16 [Ole Martin Moen, Research Fellow in Philosophy at University of Oslo “An Argument for Hedonism” Journal of Value Inquiry (Springer), 50 (2) 2016: 267–281] SJDI, brackets in original

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that pleasure is intrinsically valuable and pain is intrinsically disvaluable. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for **there is something undeniably good about** the way **pleasure** feels **and** something **undeniably bad about** the way **pain** feels, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. “Pleasure” and “pain” are here understood inclusively, as encompassing anything hedonically positive and anything hedonically negative.2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store, **I might ask: “What for?”** This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: “To buy soda.” This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: “What is buying the soda good for?” This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: “Well, I want it for the pleasure of drinking it.” If I then proceed by asking “**But** what is the pleasure of drinking the soda good for?” the discussion is likely to reach an awkward end. The reason is that the **pleasure is not good for anything further;** it is simply that for which going to the convenience store and buying the soda is good.3 As Aristotle observes: **“We never ask** [a man] **what his end is in being pleased, because** we assume that **pleasure is** choice **worthy in itself.”**4 Presumably, a similar story can be told in the case of pains, for if someone says “This is painful!” we never respond by asking: “And why is that a problem?” We take for granted that if something is painful, we have a sufficient explanation of why it is bad. If we are onto something in our everyday reasoning about values, it seems that **pleasure and pain are both places where we reach the end of the line in matters of value.**

#### 4] No act-omission distinction –

#### A] Psychology – choosing to omit is an act itself – governments decide not to act which means being presented with the aff creates a choice between two actions, neither of which is an omission.

#### B] Actor specificity – governments are culpable for omissions because their purpose is to protect the constituency – otherwise they would have no obligation to make murder illegal. Only util can escape culpability in the instance of tradeoffs – i.e. it resolves the trolley problem because a deontological theory would hold you responsible for killing regardless. Actor spec o/w – different agents have different ethical standings that affect their obligations and considerations.

#### 5] The assumption that there are self-evident truths is the basic error of Kantian metaethics. A pragmatic, intersubjective conception of truth is preferable.

Habermas ’98 - Jurgen Habermas [Former Chair of Philosophy and Sociology, Johann Wolfgang Goethe University Frankfurt am Main Institute for Social Research, Permanent Visiting Professor at Northwestern University, "Theodor Heuss Professor" at The New School, New York.], The Inclusion of the Other: Studies in Political Theory. Cambridge: MIT Press (1998), p. 36-37 AT

A sentence or proposition is justified on the semantic conception if it can be derived from basic sentences according to valid rules of inference, where a class of basic sentences is distinguished by specific (logical, epistemological, or psychological) criteria. But the foundationalist assumption that there exists such a class of basic sentences whose truth is immediately accessible to perception or to intuition has not withstood linguistic arguments for the holistic character of language and interpretation: every justification must at least *proceed from* a pre-understood context or background understanding. This failure of foundationalism recommends a pragmatic conception of justification as a public practice in which criticizable validity claims can be defended with good reasons. Of course, the criteria of rationality that determine which reasons count as good reasons can themselves be made a matter for discussion. Hence procedural characteristics of the process of argumentation itself must ultimately bear the burden of explaining why results achieved in a procedurally correct manner enjoy the presumption of validity. For example, the communicative structure of rational discourse can ensure that all relevant contributions are heard and that the unforced force of the better argument alone determines the “yes” and “no” responses of the participants.¶ The pragmatic conception of justification opens the way from an epistemic concept of truth that overcomes the well-known problems with the correspondence theory. The truth predicate refers to the language game of justification, that is, to the public redemption of validity claims. On the other hand, truth cannot be identified with justifiability or warranted assertability. The “cautionary” use of the truth predicate – regardless of how well “p” is justified, it still may not be true – highlights the difference in meaning between “truth” as an irreducible property of statements and “rational acceptability” as a context-dependent property of utterances. This difference can be understood within the horizon of possible justifications in terms of the distinction between “justified in our context” and “justified in every context.” This difference can be cashed out in turn through a weak idealization of our processes of argumentation, understood as capable of being extended indefinitely over time. When we assert “p” and thereby claim truth for “p” we accept the obligation to defend “p” in argumentation – in full awareness of its fallibility – against all future objections.

#### 6] Collapses to util: Moreover, maximizing utility is the only way to affirm equal and unconditional human dignity.

**Cummiskey ’90 -** David Cummiskey. [Associate Philosophy Professor at Bates College].Kantian Consequentialism. Ethics, Vol. 100, No. 3. 1990. http://www.jstor.org/stable/2381810.

We must not obscure the issue by characterizing this type of case as the sacrifice of individuals for some abstract “social entity.” It is not a question of some persons having to bear the cost for some elusive “overall social good.” Instead, the question is whether some persons must bear the inescapable cost for the sake of other persons. Robert Nozick, for example, argues that “to use a person in this way does not sufficiently respect and take account of the fact that he is a separate person, that his is the only life he has.” But why is this not equally true of all those whom we do not save through our failure to act? **By emphasizing solely the one who must bear the cost if we act, we fail to** sufficiently **respect** and take account of **the many other separate persons**, **each with only one life, who will bear the cost of our inaction.** In such a situation, what would a conscientious Kantian agent, an agent motivated by the unconditional value of rational beings, choose? A morally good agent recognizes that the basis of all particular duties is the principle that “rational nature exists as an end in itself” (GMM 429). Rational nature as such is the supreme objective end of all conduct. **If one** truly **believes** that **all rational beings have** an **equal value**, then **the** rational **solution** to such a dilemma **involves maximally promoting the lives and liberties of as many** rational beings **as possible** (chapter 5). In order to avoid this conclusion, the non-consequentialist Kantian needs to justify agent-centered constraints. As we saw in chapter 1, however, even most Kantian deontologists recognize that agent-centered constraints require a non- value-based rationale. But we have seen that Kant’s normative theory is based on an unconditionally valuable end. How can a concern for the value of rational beings lead to a refusal to sacrifice rational beings even when this would prevent other more extensive losses of rational beings? **If the moral law is based on the value of rational beings and their ends, then what is the rationale for prohibiting a moral agent from maximally promoting these two tiers of value? If I sacrifice some for the sake of others, I do not use them arbitrarily, and I do not deny the unconditional value of rational beings. Persons may have “dignity**, **that** is, an unconditional and incomparable worth” that **transcends** any **market value** (GMM 436), **but persons also have a fundamental equality that dictates that some must sometimes give way for the sake of others** (chapters 5 and 7). The concept of the end-in-itself does not support the view that we may never force another to bear some cost in order to benefit others. If one focuses on the equal value of all rational beings, then equal consideration suggests that one may have to sacrifice some to save many.

### Kant Offense

#### We win under Kant -

#### Reducing IP is a form of free-riding that fails the universality test, but also uses the creators of the medicine as means to an end.

Dyke 18 Dyke, Raymond. “The Categorical Imperative for Innovation and Patenting - IPWatchdog.com: Patents &amp; Patent Law.” IPWatchdog.com | Patents &amp; Patent Law, 1 Oct. 2018, www.ipwatchdog.com/2018/07/17/categorical-imperative-innovation-patenting/id=99178/.//dhsNJ

As we shall see, applying Kantian logic entails first acknowledging some basic principles; that the people have a right to express themselves, that that expression (the fruits of their labor) has value and is theirs (unless consent is given otherwise), and that government is obligated to protect people and their property. Thus, an inventor or creator has a right in their own creation, which cannot be taken from them without their consent. So, employing this canon, a proposed Categorical Imperative (CI) is the following Statement: creators should be protected against the unlawful taking of their creation by others. Applying this Statement to everyone, i.e., does the Statement hold water if everyone does this, leads to a yes determination. Whether a child, a book or a prototype, creations of all sorts should be protected, and this CI stands. This result also dovetails with the purpose of government: to protect the people and their possessions by providing laws to that effect, whether for the protection of tangible or intangible things. However, a contrary proposal can be postulated: everyone should be able to use the creations of another without charge. Can this Statement rise to the level of a CI? This proposal, upon analysis would also lead to chaos. Hollywood, for example, unable to protect their films, television shows or any content, would either be out of business or have robust encryption and other trade secret protections, which would seriously undermine content distribution and consumer enjoyment. Likewise, inventors, unable to license or sell their innovations or make any money to cover R&D, would not bother to invent or also resort to strong trade secret. Why even create? This approach thus undermines and greatly hinders the distribution of ideas in a free society, which is contrary to the paradigm of the U.S. patent and copyright systems, which promotes dissemination. By allowing freeriding, innovation and creativity would be thwarted (or at least not encouraged) and trade secret protection would become the mainstay for society with the heightened distrust.

#### On their offense –

#### They say IP isn’t universalizable - this argument is just false – patents only restrict everybody else’s ability to produce a medicine, not the patent holder’s - patents are universalizable because anybody can get them so long as nobody else had one on their invention first

#### Turn – they don’t eliminate all IP, they only reduce IP protections for Covid vaccines and treatments. This means that their plan is *less* universalizable because patents can only be had for certain medicines. They lose under their own framework.

### Covid Adv

**IPR is key to stopping counterfeits.**

**Kilbride 2020** [Patrick, vice president of International Intellectual Property for the Global Intellectual Property Center at the U.S. Chamber of Commerce, IP Watchdog, "Calls for WTO to Suspend IP Rights for Vaccine Innovation Would Jeopardize Incredible Progress" December 9, https://www.ipwatchdog.com/2020/12/09/calls-wto-suspend-ip-rights-vaccine-innovation-jeopardize-incredible-progress/id=128085/

Finally: A safe, legitimate marketplace. Patents facilitate a market for innovative medicines, throughout the development stage, as well as in commercialization. Licensing arrangements facilitate the types of collaborations that have proven so successful in 2020; they also ensure that third-party manufacturers are making, using, and selling COVID-19 solutions safely and ethically. Without it, counterfeiters and other bad actors could put shoddy, unreliable, and downright dangerous dupes on the market, all the while marketing them as legitimate products. It’s literally a matter of life and death: Thousands, if not millions, of people die each year at the hands of counterfeit drugs.

**Turns case – increased vaccine hesitancy means you’ll never solve.**

**Baschuk 2021** [Bryce, reporter for Bloomberg News, "Covid-19 pandemic: WTO holiday from vaccine talks draws calls for action" July 26, https://www.business-standard.com/article/current-affairs/covid-19-pandemic-wto-holiday-from-vaccine-talks-draws-calls-for-action-121072601721\_1.html

Specifically, opponents to the waiver say it would create a chaotic patchwork of laws, unravel existing industry partnerships, lead to a supply crunch for scarce vaccine inputs and inject even more uncertainty into already complex arrangements.¶ There’s also the possibility that an IP waiver could result in the production of counterfeit and substandard medicines, which could increase vaccine hesitancy that’s already pervasive in even the world’s wealthiest nations.

#### No solvency---their own card says that the aff does not do tech transfers or eliminate export restrictions. Marlborough reads yellow

Kumar, PhD, 7-12-21

(Rajeesh, Associate Fellow Manohar Parrikar Institute for Defence Studies and Analysis, https://www.idsa.in/issuebrief/wto-trips-waiver-covid-vaccine-rkumar-120721)

In October 2020, India and South Africa had submitted a proposal to the World Trade Organization (WTO), suggesting a waiver of certain provisions of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement for the “prevention, containment and treatment of COVID-19”. The proposal seeks the waiver of “the implementation, application, and enforcement of sections 1, 4, 5 and 7 of part II of the TRIPS agreement”, which are stipulations referring to copyright, industrial design, patents, and undisclosed information (trade secrets).1 The proponents of the proposal argue that a waiver will enable timely and equitable access to affordable health products and technologies, including vaccines. Though many member countries had supported and co-sponsored the proposal, a small but influential group of countries, mainly Australia, Canada, the European Union (EU), Japan, the United Kingdom (UK) and the United States (US), opposed it. They argued that existing exceptions under the TRIPS Agreement are sufficient to address the concerns mentioned in the proposal. This resulted in sidelining of the waiver proposal for months. However, on 5 May 2021, the Joseph Biden administration announced its support for waiving intellectual property protections for COVID-19 vaccines.2 It was a significant step towards breaking the seven-month gridlock, and led to many more countries modifying their position on the waiver proposal. On 25 May 2021, the co-sponsors of the waiver proposal submitted a revised proposal that specified the scope of the waiver as applying to “health products and technologies” and also added a section on the proposed duration of the waiver, i.e., three years.3 At present, more than 100 countries, including the US and China support this proposal. The principal opponent of the waiver is the EU and in June 2021, it submitted an alternative proposal to the TRIPS Council, which requested to keep TRIPS’ provisions intact and focused on compulsory licensing and removing vaccine export restrictions to address the concerns raised by India and South Africa.4 The EU proposal also stated that the TRIPS Agreement does not prevent countries from taking measures to protect public health.5 At the meeting of the TRIPS Council on 8–9 June 2021, the member states agreed to text-based negotiations focusing on two proposals tabled by members. The members also decided to hold a series of meetings till the end of July 2021 to take stock of the text-based negotiations. However, the latest developments show that the waiver discussions hit a hurdle due to a split between the developed and developing countries over the negotiation text. This brief discusses how TRIPS becomes a barrier to the equitable access of COVID-19 vaccines. It also examines how a waiver will help India in its fight against COVID-19 at home and abroad. TRIPS and its Exceptions TRIPS, a comprehensive multilateral agreement on Intellectual Property (IP), was an outcome of the Uruguay Round (1986–94) of negotiations of the General Agreement on Tariffs and Trade (GATT). The Agreement came into force on 1 January 1995 and offers a minimum standard of protection for Intellectual Property Rights (IPR).6 In WTO, IPR are divided into two main categories. First, copyright and related rights (Articles 9 to 14, Part II of the TRIPS Agreement). Second, industrial property that includes trademarks, geographical indications, industrial designs, patents, integrated circuit layout designs, and undisclosed information (Articles 15 to 38, Part II of the TRIPS Agreement).7 Article IX.3 and IX.4 of the Marrakesh Agreement Establishing the WTO deals with TRIPS waivers. Article IX.3 says that in “exceptional circumstances” the Ministerial Conference may waive off an obligation imposed on WTO member countries.8 Such a decision requires the support of three-fourths of the WTO membership. According to Article IX.4, any waiver granted for more than one year will be reviewed by the Ministerial Conference. Based on the annual review, the Conference may extend, modify, or terminate the waiver. The TRIPS Agreement provides some flexibility primarily in the form of compulsory licensing and research exceptions through Articles 30 and 31. While Article 30 permits WTO members to make limited exceptions to patent rights, Article 31 provides a detailed exception, provided certain conditions are met. Compulsory licensing is the process of granting a license by a government to use a patent without the patent holder's consent. Article 31 permits granting compulsory license under circumstances such as “national emergencies”, “other circumstances of extreme urgency”, “public noncommercial use”, or against “anti-competitive” practices.9 In addition to these original waivers, the Declaration on the TRIPS Agreement and Public Health, adopted at the 2001 Doha Ministerial Meeting, also recognises some exceptions, for instance, in situations of a public health emergency, member countries have the freedom to determine the grounds upon which compulsory licenses are granted. Similarly, under Article 66.1, the least developed countries (LDCs) are given waivers for implementing TRIPS on pharmaceuticals till 1 January 2033. COVID-19 and TRIPS Waiver Two significant factors rekindled the debate on TRIPS waiver for essential medical products—first, vaccine inequity, and second, the insufficiency of existing waiver provisions in fighting the COVID-19 pandemic. COVID-19 is an exceptional circumstance, and equitable global access to the vaccine is necessary to bring the pandemic under control. However, the world is witnessing quite the reverse, i.e., vaccine nationalism. Vaccine nationalism is “my nation first” approach to securing and stockpiling vaccines before making them available in other countries. A TRIPS waiver would be instrumental in addressing the growing inequality in the production, distribution, and pricing of the COVID-19 vaccines. Vaccine Inequity According to Duke Global Health Innovation Center, which monitors COVID-19 vaccine purchases, rich nations representing just 14 per cent of the world population have bought up to 53 per cent of the most promising vaccines so far. As of 4 July 2021, the high-income countries (HICs) purchased more than half (6.16 billion) vaccine doses sold globally. At the same time, the low-income countries (LICs) received only 0.3 per cent of the vaccines produced. The low and middle-income countries (LMICs), which account for 81 per cent of the global adult population, purchased 33 per cent, and COVAX (COVID-19 Vaccines Global Access) has received 13 per cent.10 Many HICs bought enough doses to vaccinate their populations several times over. For instance, Canada procured 10.45 doses per person, while the UK, EU and the US procured 8.18, 6.89, and 4.60 doses per inhabitant, respectively.11 Source:“Tracking COVID-19 Vaccine Purchases Across the Globe”, Duke Global Health Innovation Center, Updated 9 July 2021. Consequently, there is a significant disparity between HICs and LICs in vaccine administration as well. As of 8 July 2021, 3.32 billion vaccine doses had been administered globally.12 Nonetheless, only one per cent of people in LICs have been given at least one dose. While in HICs almost one in four people have received the vaccine, in LICs, it is one in more than 500. The World Health Organization (WHO) notes that about 90 per cent of African countries will miss the September target to vaccinate at least 10 per cent of their populations as a third wave looms on the continent.13 South Africa, the most affected African country, for instance, has vaccinated less than two per cent of its population of about 59 million. This is in contrast with the US where almost 47.5 per cent of the population of more than 330 million has been fully vaccinated. In Sub-Saharan Africa, vaccine rollout remains the slowest in the world. According to the International Monetary Fund (IMF), at current rates, by the end of 2021, a massive global inequity will continue to exist, with Africa still experiencing meagre vaccination rates while other parts of the world move much closer to complete vaccination.14 This vaccine inequity is not only morally indefensible but also clinically counter-productive. If this situation prevails, LICs could be waiting until 2025 for vaccinating half of their people. Allowing most of the world’s population to go unvaccinated will also spawn new virus mutations, more contagious viruses leading to a steep rise in COVID-19 cases. Such a scenario could cause twice as many deaths as against distributing them globally, on a priority basis. Preventing this humanitarian catastrophe requires removing all barriers to the production and distribution of vaccines. TRIPS is one such barrier that prevents vaccine production in LMICs and hence its equitable distribution. TRIPS: Barrier to Equitable Health Care Access The opponents of the waiver proposal argue that IPR are not a significant barrier to equitable access to health care, and existing TRIPS flexibilities are sufficient to address the COVID-19 pandemic. However, history suggests the contrary. For instance, when South Africa passed the Medicines and Related Substances Act of 1997 to address the HIV/AIDS public health crisis, nearly 40 of world’s largest and influential pharma companies took the South African government to court over the violation of TRIPS. The Act, which invoked the compulsory licensing provision, allowed South Africa to produce affordable generic drugs.15 The Big Pharma also lobbied developed countries, particularly the US, to put bilateral trade sanctions against South Africa.16 Similarly, when Indian company Cipla decided to provide generic antiretrovirals (ARVs) to the African market at a lower cost, Big Pharma retaliated through patent litigations in Indian and international trade courts and branded Indian drug companies as thieves.17 Another instance was when Swiss company Roche initiated patent infringement proceedings against Cipla’s decision to launch a generic version of cancer drug, “erlotinib”. Though the Delhi High Court initially dismissed Roche's appeal by citing “public interest” and “affordability of medicines,” the continued to pressure the generic pharma companies over IPR. 18 Likewise, Pfizer’s aggressive patenting strategy prevented South Korea in developing pneumonia vaccines for children.19 A recent document by Médecins Sans Frontières (MSF), or Doctors Without Borders, highlights various instances of how IP hinders manufacturing and supply of diagnostics, medical equipment, treatments and vaccines during the COVID-19 pandemic. For instance, during the peak of the COVID-19 first wave in Europe, Roche rejected a request from the Netherlands to release the recipe of key chemical reagents needed to increase the production of diagnostic kits. Another example was patent holders threatening producers of 3D printing ventilators with patent infringement lawsuits in Italy.20 The MSF also found that patents pose a severe threat to access to affordable versions of newer vaccines.21 Source:“COVID-19 Vaccine R&D Investments”, Global Health Centre, Graduate Institute, Geneva, Updated 9 July 2021. The opponents of the TRIPS waiver also argue that IP is the incentive for innovation and if it is undermined, future innovation will suffer. However, most of the COVID-19 medical innovations, particularly vaccines, are developed with public financing assistance. Governments spent billions of dollars for COVID-19 vaccine research. Notably, out of $6.1 billion in investment tracked up to July 2021, 98.12 per cent was public funding.22 The US and Germany are the largest investors in vaccine R&D with $2.2 billion and $1.5 billion funding. Source:“COVID-19 Vaccine R&D Investments”, Global Health Centre, Graduate Institute, Geneva, Updated 9 July 2021. Private companies received 94.6 per cent of this funding; Moderna received the highest $956.3 million and Janssen $910.6 million. Moreover, governments also invested $50.9 billion for advance purchase agreements (APAs) as an incentive for vaccine development. A recent IMF working paper also notes that public research institutions were a key driver of the COVID-19 R&D effort—accounting for 70 per cent of all COVID-19 clinical trials globally.23 The argument is that vaccines are developed with the support of substantial public financing, hence there is a public right to the scientific achievements. Moreover, private companies reaped billions in profits from COVID-19 vaccines. Source: Katharina Buchholz, “COVID-19 Vaccines Lift Pharma Company Profits”, Statista, 17 May 2021. One could argue that since the US, Germany and other HICs are spending money, their citizens are entitled to get vaccines first, hence vaccine nationalism is morally defensible. Nonetheless, it is not the case. The TRIPS Agreement includes several provisions which mandates promotion of technology transfer from developed countries to LDCs. For instance, Article 7 states that "the protection and enforcement of IP rights should contribute to the promotion of technological innovation and the transfer and dissemination of technology, to the mutual advantage of producers and users of technical knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations."24 Similarly, Article 66.2 also mandates the developed countries to transfer technologies to LDCs to enable them to create a sound and viable technological base. The LMICs opened their markets and amended domestic patent laws favouring developing countries’ products against this promise of technology transfer. Another argument against the proposed TRIPS waiver is that a waiver would not increase the manufacturing of COVID-19 vaccines. Indeed, one of the significant factors contributing to vaccine inequity is the lack of manufacturing capacity in the global south. Further, a TRIPS waiver will not automatically translate into improved manufacturing capacity. However, a waiver would be the first but essential step to increase manufacturing capacity worldwide. For instance, to export COVID-19 vaccine-related products, countries need to ensure that there are no IP restrictions at both ends – exporting and importing. The market for vaccine materials includes consumables, single-use reactors bags, filters, culture media, and vaccine ingredients. Export blockages on raw materials, equipment and finished products harm the overall output of the vaccine supply chain. If there is no TRIPS restriction, more governments and companies will invest in repurposing their facilities. Similarly, the arguments such as that no other manufacturers can carry out the complex manufacturing process of COVID-19 vaccines and generic manufacturing as that would jeopardise quality, have also been proven wrong in the past. For instance, in the early 1990s, when Indian company Shantha Biotechnics approached a Western firm for a technology transfer of Hepatitis B vaccine, the firm responded that “India cannot afford such high technology vaccines… And even if you can afford to buy the technology, your scientists cannot understand recombinant technology in the least.”25 Later, Shantha Biotechnics developed its own vaccine at $1 per dose, and the UNICEF (United Nations Children’s Emergency Fund) mass inoculation programme uses this vaccine against Hepatitis B. In 2009, Shantha sold over 120 million doses of vaccines globally. India also produces high-quality generic drugs for HIV/AIDS and cancer treatment and markets them across the globe. Now, a couple of Indian companies are in the last stage of producing mRNA (Messenger RNA) vaccines.26 Similarly, Bangladesh and Indonesia claimed that they could manufacture millions of COVID-19 vaccine doses a year if pharmaceutical companies share the know-how.27 Recently, Vietnam also said that the country could satisfy COVID-19 vaccine production requirements once it obtains vaccine patents.28 Countries like the United Arab Emirates (UAE), Turkey, Cuba, Brazil, Argentina and South Korea have the capacity to produce high-quality vaccines but lack technologies and know-how. However, Africa, Egypt, Morocco, Senegal, South Africa and Tunisia have limited manufacturing capacities, which could also produce COVID-19 vaccines after repurposing. Moreover, COVID-19 vaccine IPR runs across the entire value chain – vaccine development, production, use, etc. A mere patent waiver may not be enough to address the issues related to its production and distribution. What is more important here is to share the technical know-how and information such as trade secrets. Therefore, the existing TRIPS flexibilities, such as compulsory and voluntary licensing, are insufficient to address this crisis. Further, compulsory licensing and the domestic legal procedures it requires is cumbersome and not expedient in a public health crisis like the COVID-19 pandemic.

#### The DA turns case: Need to sustain effective research now to avoid future pandemics

Lander 8/4/21 [Eric Lander, President Biden’s Science Advisory and Director of the White House Office of Science and Technology Policy) “Opinion: As bad as Covid-19 has been, a future pandemic could be even worse—unless we act now” 8/4/21, The Washington Post] RM

[Coronavirus](https://www.washingtonpost.com/coronavirus/?itid=lk_inline_manual_3) vaccines can end the current pandemic if enough people choose to protect themselves and their loved ones by getting vaccinated. But in the years to come, we will still need to defend against a pandemic side effect: collective amnesia. As public health emergencies recede, societies often quickly forget their experiences — and **fail to prepare for future challenges**. For pandemics, such a course would be disastrous. **New infectious diseases have been emerging at an accelerating pace,** and they are spreading faster. Our federal government is responsible for defending the United States against future threats. That’s why President Biden has asked Congress to fund his plan to build on current scientific progress to keep new infectious-disease threats from turning into pandemics like covid-19. As the president’s science adviser, I know what’s becoming possible. For the first time in our history, we have an opportunity not just to refill our stockpiles but also to transform our capabilities. However, **if we don’t start preparing now for future pandemics, the window for action will close.** Covid-19 has been a catastrophe: The toll in the United States alone is [more than 614,000 lives](https://www.washingtonpost.com/graphics/2020/national/coronavirus-us-cases-deaths/?itid=lk_inline_manual_11) and has been estimated to exceed [$16 trillion](https://jamanetwork.com/journals/jama/fullarticle/2771764), with disproportionate impact on vulnerable and marginalized communities. But a future pandemic could be even worse — unless we take steps now. It’s important to remember that the virus behind covid-19 is far less deadly than the 1918 influenza. The virus also belongs to a well-understood family, coronaviruses. It was possible to design vaccines within days of knowing the virus’s genetic code because 20 years of [basic scientific research](https://science.sciencemag.org/content/372/6538/109.full) had revealed which protein to target and how to stabilize it. And while the current virus spins off variants, its mutation rate is slower than that of most viruses. **Unfortunately, most of the 26 families of viruses that infect humans are less well understood or harder to control**. We have a great deal of work still ahead. The development of [mRNA vaccine technology](https://www.washingtonpost.com/health/2020/12/06/covid-vaccine-messenger-rna/?itid=lk_inline_manual_17) — thanks to more than a decade of foresighted basic research — was a game-changer. It shortened the time needed to design and test vaccines to less than a year — far faster than for any previous vaccine. And it’s been surprisingly effective against covid-19. Still, there’s much more to do. We don’t yet know how mRNA vaccines will perform against other viruses down the road. And **when the next pandemic breaks out, we’ll want to be able to respond even faster.** Fortunately, the scientific community has been developing a bold plan to keep future viruses from becoming pandemics. Here are a few of the goals we should shoot for: The capability to design, test and approve safe and effective vaccines within 100 days of detecting a pandemic threat (for covid-19, that would have meant May 2020); manufacture enough doses to supply the world within 200 days; and speed vaccination campaigns by replacing sterile injections with skin patches. Diagnostics simple and cheap enough for daily home testing to limit spread and target medical care. Early-warning systems to spot new biological threats anywhere in the world soon after they emerge and monitor them thereafter. We desperately need to strengthen our public health system — from expanding the workforce to modernizing labs and data systems — including to ensure that vulnerable populations are protected. And we need to coordinate actions with our international partners, because pandemics know no borders. These goals are ambitious, but they’re feasible — provided the work is managed with the seriousness, focus and accountability of NASA’s Apollo Program, which sent humans to the moon. Importantly, these capabilities won’t just prepare us for future pandemics; they’ll also improve public health and medical care for infectious diseases today. Preparing for threats is a core national responsibility. That’s why our government invests heavily in missile defense and counterterrorism. We need to similarly protect the nation against biological threats, which range from the ongoing risk of pandemics to the possibility of deliberate use of bioweapons. Pandemics cause massive death and disruption. From a financial standpoint, they’re also astronomically expensive. If, as might be expected from [history](https://www.cfr.org/timeline/major-epidemics-modern-era) and current trends, we suffered a pandemic of the current scale every two decades, the annualized cost would exceed $500 billion per year. Investing a much smaller amount to avert this toll is an economic and moral imperative. The White House will put forward a detailed plan this month to ensure that the United States can fully prepare before the next outbreak. It’s hard to imagine a higher economic or human return on national investment.

#### Nuclear war will not lead to extinction -- their claims are hasty generalizations.

David S. **Stevenson 17**. Professor of planetary science at Caltech. 2017. “Agents of Mass Destruction.” The Nature of Life and Its Potential to Survive, Springer, Cham, pp. 273–340. link.springer.com, doi:10.1007/978-3-319-52911-0\_7.

Now, this is clearly not sufficient to wipe out humanity, but an all-out nuclear conflagration is a different kettle of fish. Much of this analysis was done during the 1980s, following on from the work of Carl Sagan and others, who’d analyzed the effects of global dust storms on Mars. To consider the lethal effects of an all-out nuclear war, instead of 100 small nuclear warheads we’re going to launch a **sizable fraction of the full Russian and NATO arsenal**. This consists of around 10,000 nuclear warheads with 5–10 times the explosive capacity of the Hiroshima bomb. If a quarter of these are launched at all the major European, U. S. and Russian cities—along with military targets—over 100 targets are incinerated. Cities such as London would be hit with multiple warheads, ensuring that virtually all of it is destroyed. Other military targets include the nuclear bases, which in the UK include many of the deep sea lochs around the west coast of Scotland. These, too, would be destroyed, likely with large, multi-megaton devices to ensure destruction was driven deeper into the ocean. Of the remaining 7600 warheads, many **could** be launched in **pointless retaliatory attacks**. Tens to hundreds of thousands of square kilometers of land would ignite and the ash clouds rapidly fill the lower stratosphere. Nearer the ground, lower temperature combustion would release thick clouds of toxic gases. These would poison much of the wildlife and any humans that remained in areas that were downwind of the cities. In all, 150 million tons of particles would enter the stratosphere and begin working their lethal magic. Stratospheric winds would disperse this from their starting points above the decimated cities. Soon the globe would be enveloped in a blanket of ash. Following the Indian sub-continental war, the sky would appear overcast. Following a full nuclear conflict, the northern hemisphere skies would darken to a dusk-like state, with 70% of the Sun’s light blocked. This would persist for 1–3 years, depending on the scale of the conflagration. Temperatures would fall by up to 20 °C across North America and by up to 30 °C over Eurasia (Fig. 7.3). Such falls would take temperatures well below zero across most northern continental regions. This would eliminate photosynthesis on land and in the oceans. Nighttime frosts would afflict many other, normally temperate and tropical regions. Global photosynthetic productivity would plummet. [[FIGURE 7.3 OMITTED]] Tropical and southern hemispheric regions wouldn’t be spared. Dust would reduce illumination by 35%, causing marked cooling. The climate would have to rapidly readjust to this new, colder state. From the northern hemisphere, rapid continental cooling would drive powerful, cold outflows into neighboring ocean basins. Such forced monsoon winds would disperse remaining radioactive dust to the southern hemisphere, contaminating any areas not affected directly by fallout. These dry “nuclear monsoon” winds would tend to pick up moisture en route to the southern hemisphere. Where “nuclear-monsoon” winds reached the shores of some southern continents, rainfall might increase—not that you’d want this sort of contaminated rainfall. Meanwhile, the obliterated northern continents would suffer a rapid reduction in precipitation, as cold, dry winds descended and blew any oceanic moisture outwards. Overall, lowering temperatures would reduce global rainfall to only 45% of its current value. Any plant not in seed and not tolerant to drought would be threatened with extinction—along with any animals that depended upon it. Indeed, with dry, cold and poorly illuminated conditions prevailing, most photosynthesis would cease, and herbivorous life would become grossly endangered, if not driven to outright extinction. When the dust settled, literally as well as figuratively, one would expect **most** human life to have been eliminated, along with most other large animal species. As a general rule those animals with a mass over 25 kg are most susceptible to extinction, because these have the largest appetites that are hardest to satiate. Although forests, not afflicted directly by the nuclear war, would shrivel, we would expect a **reasonably fast recovery**. This would be aided by **elevated levels of carbon dioxide** from all the incinerated cities and their residents. Thus, when the skies cleared **plant life would recover strongly**, aided in particular by a gross reduction in organisms that would **otherwise eat them**. Although the carbon dioxide-driven rebound might benefit plants, a spike in global temperatures could drive further species to extinction. It is, therefore, likely that Earth would suffer a global mass extinction event on a par with the demise of the dinosaurs at the end of the Cretaceous. What about humanity—**would it survive?** The **direct** death toll from the nuclear war would hover around **1.0–1.5 billion**

if we assume few survivors in the cities. Radioactive fallout might kill another few hundred million in areas downwind of the explosions. Remember that climate changes and nuclear winter-driven monsoon outflows would push radioactivity from Eurasia into China (assuming it was not directly involved) and southwards across India, southeast Asia and onto Australia and New Zealand. Likewise, much of South America and Africa would be grossly polluted by outflowing winds blowing from the devastated northern continents. These contaminated winds might kill another few hundred million. However, the real killer would be the **prolonged cold**. Aside from a meager band of bunkered humans with access to a long-lasting power supply that was sufficient to run underground greenhouses, almost all remaining humans in North America and Eurasia could expect to die from starvation over the ensuing few weeks to months if they could not move elsewhere. The death toll would then top two billion. Climatic effects in China, southern Asia and the southern hemisphere would lead to mass starvation, potentially killing a few billion more. If we begin our all-out war in the next 30 years, then of the ten billion likely to populate the planet, less than **one billion would survive**. Some calculations lower the surviving population to a **few hundred thousand**, with almost the entire human population starving to death. However, this may be a little **overly pessimistic**. Humans **survived the ice ages** where conditions were **comparable to a nuclear winter**. Certainly, the air wasn’t radioactive, and no, the skies weren’t darkened. However, the dregs of humanity are likely to **cling on along the coastlines of southern South America, Southern Africa and the Antipodes**. Living off the sea—the contaminated sea—humanity could **cling on** long enough for the biosphere to recover. Most of the planet would be uninhabitable for````````````````````````````` decades thanks to chemical and radioactive pollution from the war. However, there would be sufficient land to allow **bands of survivors**. At this point it is down to luck whether humanity survived overall. Humanity could become extinct if the remaining thousands of people are dispersed into isolated communities. Without a means to interbreed, small populations could become so inbred as to become unstable and go into catastrophic decline. Conversely, very isolated but manageable populations could **diversify** so that given sufficient time **new species of humans** might emerge in each community. **Longer term**, the planet would likely **benefit** from such a global conflict. Spurred on by an enhanced **mutation rates** and the loss of its top predator, most other surviving species would be presented with an **evolutionary window** where they could **strongly diversify**. Earth would experience its second Paleocene where surviving mammalian species could diversify to fill the niches we’d abandoned. Only the rapid re-expansion of remaining human species would prevent this—and this would likely depend on what technology remained and how quickly the population could re-grow.

#### Best science proves no nuke winter – their models forgot rain existed

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3.2. Fire Results The no-rubble simulation produces a significantly more intense fire, with more fire spread, and consequently a significantly stronger plume with larger amounts of BC reaching into the upper atmosphere than the simulation with rubble, illustrated in Figure 5. While the no-rubble simulation represents the worst case scenario involving vigorous fire activity, only a relatively small amount of carbon makes its way into the stratosphere during the course of the simulation. But while small compared to the surface BC mass, stratospheric BC amounts from the current simulations are significantly higher than what would be expected from burning vegetation such as trees (Heilman et al., 2014); for example, the higher energy density of the building fuels and the initial fluence from the weapon produce an intense response within HIGRAD-FIRETEC with initial updrafts of order 100 m/s in the lower troposphere. Or, in comparison to a mass fire, wildfires will burn only

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a small amount of fuel in the corresponding time period (roughly 10 min) that a nuclear weapon fluence can effectively ignite a large area of fuel producing an impressive atmospheric response. Figure 6 shows vertical profiles of BC multiplied by 100 (number of cities involved in the exchange) from the two simulations. The total amount of BC produced is in line with previous estimates (about 3.69 Tg from no-rubble simulation); however, the majority of BC resides below the stratosphere (3.46 Tg below 12 km) and can be readily impacted by scavenging from precipitation either via pyrocumulonimbus produced by the fire itself (not modeled) or other synoptic weather systems. While the impact on climate of these more realistic profiles will be explored in the next section, it should be mentioned that these estimates are still at the high end, considering the inherent simplifications in the combustion model that lead to overestimating BC production. 3.3. Climate Results Long-term climatic effects critically depend on the initial injection height of the soot, with larger quantities reaching the upper troposphere/lower stratosphere inducing a greater cooling impact because of longer residence times (Robock, Oman, Stenchikov, et al., 2007). Absorption of solar radiation by the BC aerosol and its subsequent radiative cooling tends to heat the surrounding air, driving an initial upward diffusion of the soot plumes, an effect that depends on the initial aerosol concentrations. Mixing and sedimentation tend to reduce this process, and low-altitude emissions are also significantly impacted by precipitation if aging of the BC aerosol occurs on sufficiently rapid time scales. But once at stratospheric altitudes, aerosol dilution via coagulation is hindered by low particulate concentrations (e.g., Robock, Oman, Stenchikov, et al., 2007) and lofting to much higher altitudes is inhibited by gravitational settling in the low-density air (Stenke et al., 2013), resulting in more stable BC concentrations over long times. Of the initial BC mass released in the atmosphere, most of which is emitted below 9 km, 70% rains out within the first month and 78%, or about 2.9 Tg, is removed within the first 2 months (Figure 7, solid line), with the remainder (about 0.8 Tg, dashed line) being transported above about 12 km (200 hPa) within the first week. This outcome differs from the findings of, for example, Stenke et al. (2013) (their high BCload cases) and Mills et al. (2014), who found that most of the BC mass (between 60 and 70%) is lifted in the stratosphere within the first couple of weeks. This can also be seen in Figure 8 (red lines) and in Figure 9, which include results from our calculation with the initial BC distribution from Mills et al. (2014). In that case, only 30% of the initial BC mass rains out in the troposphere during the first 2 weeks after the exchange, with the remainder rising to the stratosphere. In the study of Mills et al. (2008) this percentage is somewhat smaller, about 20%, and smaller still in the experiments of Robock, Oman, Stenchikov, et al. (2007), in which the soot is initially emitted in the upper troposphere or higher. In Figure 7, the e-folding time scale for the removal of tropospheric soot, here interpreted as the time required for an initial drop of a factor e, is about 1 week. This result compares favorably with the “LT” experiment of Robock, Oman, Stenchikov, et al. (2007), considering 5 Tg of BC released in the lower troposphere, in which 50% of the aerosols are removed within 2 weeks. By contrast, the initial e-folding time scale for the removal of stratospheric soot in Figure 8 is about 4.2 years (blue solid line), compared to about 8.4 years for the calculation using Mills et al. (2014) initial BC emission (red solid line). The removal time scale from our forced ensemble simulations is close to those obtained by Mills et al. (2008) in their 1 Tg experiment, by Robock, Oman, Stenchikov, et al. (2007) in their experiment “UT 1 Tg,” and by Stenke et al. (2013) in their experiment “Exp1,” in all of which 1 Tg of soot was emitted in the atmosphere in the aftermath of the exchange. Notably, the e-folding time scale for the decline of the BC mass in Figure 8 (blue solid line) is also close to the value of about 4 years quoted by Pausata et al. (2016) for their long-term “intermediate” scenario. In that scenario, which is also based on 5 Tg of soot initially distributed as in Mills et al. (2014), the factor-of-2 shorter residence time of the aerosols is caused by particle growth via coagulation of BC with organic carbon. Figure 9 shows the BC mass-mixing ratio, horizontally averaged over the globe, as a function of atmospheric pressure (height) and time. The BC distributions used in our simulations imply that the upward transport of particles is substantially less efficient compared to the case in which 5 Tg of BC is directly injected into the upper troposphere. The semiannual cycle of lofting and sinking of the aerosols is associated with atmospheric heating and cooling during the solstice in each hemisphere (Robock, Oman, Stenchikov, et al., 2007). During the first year, the oscillation amplitude in our forced ensemble simulations is particularly large during the summer solstice, compared to that during the winter solstice (see Figure 9, bottom), because of the higher soot concentrations in the Northern Hemisphere, as can be seen in Figure 11 (see also Figure 12, left). Comparing the top and bottom panels of Figure 9, the BC reaches the highest altitudes during the first year in both cases, but the concentrations at 0.1 hPa in the top panel can be 200 times as large. Qualitatively, the difference can be understood in terms of the air temperature increase caused by BC radiation emission, which is several tens of kelvin degrees in the simulations of Robock, Oman, Stenchikov, et al. (2007) (see their Figure 4), Mills et al. (2008) (see their Figure 5), Stenke et al. (2013 (see high-load cases in their Figure 4), Mills et al. (2014) (see their Figure 7), and Pausata et al. (2016) (see 1 day emission cases in their Figure 1), due to high BC concentrations, but it amounts to only about 10 K in our forced ensemble simulations, as illustrated in Figure 10. Results similar to those presented in Figure 10 were obtained from the experiment “Exp1” performed by Stenke et al. (2013) (see their Figure 4). In that scenario as well, somewhat less than 1 Tg of BC remained in the atmosphere after the initial rainout.

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As mentioned before, the BC aerosol that remains in the atmosphere, lifted to stratospheric heights by the rising soot plumes, undergoes sedimentation over a time scale of several years (Figures 8 and 9). This mass represents the effective amount of BC that can force climatic changes over multiyear time scales. In the forced ensemble simulations, it is about 0.8 Tg after the initial rainout, whereas it is about 3.4 Tg in the simulation with an initial soot distribution as in Mills et al. (2014). Our more realistic source simulation involves the worst case assumption of no-rubble (along with other assumptions) and hence serves as an upper bound for the impact on climate. As mentioned above and further discussed below, our scenario induces perturbations on the climate system similar to those found in previous studies in which the climatic response was driven by roughly 1 Tg of soot rising to stratospheric heights following the exchange. Figure 11 illustrates the vertically integrated mass-mixing ratio of BC over the globe, at various times after the exchange for the simulation using the initial BC distribution of Mills et al. (2014) (Figure 11, top row) and as an average from the forced ensemble members (Figure 11, bottom row). All simulations predict enhanced concentrations at high latitudes during the first year after the exchange. In the cases shown in the top row, however, these high concentrations persist for several years (see also Figure 1 of Mills et al., 2014), whereas the forced ensemble simulations indicate that the BC concentration starts to decline after the first year. In fact, in the simulation represented in the top row, mass-mixing ratios larger than about 1 kg of BC per teragram of air persist for well over 10 years after the exchange, whereas they only last for 3 years in our forced simulations (compare top and middle panels of Figure 9). After the first year, values drop below 3 kg BC/Tg air, whereas it takes about 8 years to reach these values in the simulation in the top row (see also Robock, Oman, Stenchikov, et al., 2007). Over crop-producing, midlatitude regions in the Northern Hemisphere, the BC loading is reduced from more than 0.8 kg BC/Tg air in the simulation in the top row to 0.2–0.4 kg BC/Tg air in our forced simulations (see middle and right columns). The more rapid clearing of the atmosphere in the forced ensemble is also signaled by the soot optical depth in the visible radiation spectrum, which drops below values of 0.03 toward the second half of the first year at midlatitudes in the Northern Hemisphere and everywhere on the globe after about 2.5 years (without ever attaining this value in the Southern Hemisphere). In contrast, the soot optical depth in the calculation shown in the top row of Figure 11 becomes smaller than 0.03 everywhere only after about 10 years. The two cases show a similar tendency, in that the BC optical depth is typically lower between latitudes 30°S–30°N than it is at other latitudes. This behavior is associated to the persistence of stratospheric soot toward high-latitudes and the Arctic/Antarctic regions, as illustrated by the zonally averaged, column-integrated mass-mixing ratio of the BC in Figure 12 for both the forced ensemble simulations (left panel) and the simulation with an initial 5 Tg BC emission in the upper troposphere (right panel). The spread in the globally averaged (near) surface temperature of the atmosphere, from the control (left panel) and forced (right panel) ensembles, is displayed in Figure 13. For each month, the plots show the largest variations (i.e., maximum and minimum values), within each ensemble of values obtained for that month, relative to the mean value of that month. The plot also shows yearly averaged data (thinner lines). The spread is comparable in the control and forced ensembles, with average values calculated over the 33 year run length of 0.4–0.5 K. This spread is also similar to the internal variability of the globally averaged surface temperature quoted for the NCAR Large Ensemble Community Project (Kay et al., 2015). These results imply that surface air temperature differences, between forced and control simulations, which lie within the spread, may not be distinguished from effects due to internal variability of the two simulation ensembles. Figure 14 shows the difference in the globally averaged surface temperature of the atmosphere (top panel), net solar radiation flux at surface (middle panel), and precipitation rate (bottom panel), computed as the (forced minus control) difference in ensemble mean values. The sum of standard deviations from each ensemble is shaded. Differences are qualitatively significant over the first few years, when the anomalies lie near or outside the total standard deviation. Inside the shaded region, differences may not be distinguished from those arising from the internal variability of one or both ensembles. The surface solar flux (middle panel) is the quantity that appears most affected by the BC emission, with qualitatively significant differences persisting for about 5 years. The precipitation rate (bottom panel) is instead affected only at the very beginning of the simulations. The red lines in all panels show the results from the simulation applying the initial BC distribution of Mills et al. (2014), where the period of significant impact is much longer owing to the higher altitude of the initial soot distribution that results in longer residence times of the BC aerosol in the atmosphere. When yearly averages of the same quantities are performed over the India-Pakistan region, the differences in ensemble mean values lie within the total standard deviations of the two ensembles. The results in Figure 14 can also be compared to the outcomes of other previous studies. In their experiment “UT 1 Tg,” Robock, Oman, Stenchikov, et al. (2007) found that when only 1 Tg of soot remains in the atmosphere after the initial rainout, temperature and precipitation anomalies are about 20% of those obtained from their standard 5 Tg BC emission case. Therefore, the largest differences they observed, during the first few years after the exchange, were about 0.3 K and 0.06 mm/day, respectively, comparable to the anomalies in the top and bottom panels of Figure 14. Their standard 5 Tg emission case resulted in a solar radiation flux anomaly at surface of 12 W/m2 after the second year (see their Figure 3), between 5 and 6 times as large as the corresponding anomalies from our ensembles shown in the middle panel. In their experiment “Exp1,” Stenke et al. (2013) reported global mean surface temperature anomalies not exceeding about 0.3 K in magnitude and precipitation anomalies hovering around 0.07 mm/day during the first few years, again consistent with the results of Figure 14. In a recent study, Pausata et al. (2016) considered the effects of an admixture of BC and organic carbon aerosols, both of which would be emitted in the atmosphere in the aftermath of a nuclear exchange. In particular, they concentrated on the effects of coagulation of these aerosol species and examined their climatic impacts. The initial BC distribution was as in Mills et al. (2014), although the soot burden was released in the atmosphere over time periods of various lengths. Most relevant to our and other previous work are their 1 day emission scenarios. They found that during the first year, the largest values of the atmospheric surface temperature anomalies ranged between about 0.5 and 1.3 K, those of the sea surface temperature (SST) anomalies ranged between 0.2 and 0.55 K, and those of the precipitation anomalies varied between 0.15 and 0.2 mm/d. All these ranges are compatible with our results shown in Figure 14 as red lines and with those of Mills et al. (2014) (see their Figures 3 and 6). As already mentioned in section 2.3, the net solar flux anomalies at surface are also consistent. This overall agreement suggests that the inclusion of organic carbon aerosols, and ensuing coagulation with BC, should not dramatically alter the climatic effects resulting from our forced ensemble simulations. Moreover, aerosol growth would likely shorten the residence time of the BC particulate in the atmosphere (Pausata et al., 2016), possibly reducing the duration of these effects.

#### Turn: Reductions in IPR could result in unsafe or ineffective medicines. Turns solvency because too many people will be afraid of the vaccine to achieve herd immunity.

Crosby et al. 21Daniel Crosby, Evan Diamond, Isabel Fernandez De La Cuesta, Jamieson Greer, Jeffrey Telep, Brian White; Crosby specializes in international trade, investment and matters related to public international law. Diamond is a partner on our Intellectual Property, Patent, Trademark and Copyright Litigation team.; 3-5-2021; "Group of Nearly 60 WTO Members Seek Unprecedented Waiver from WTO Intellectual Property Protection for COVID-related Medical Products"; https://www.jdsupra.com/legalnews/group-of-nearly-60-wto-members-seek-2523821/, JD Supra, accessed 7-21-2021; JPark

Waiver risks uncontrolled use of patented technologies, without improving vaccine access. Pharmaceutical companies can provide, and have provided, licenses to distribute or scale-up production of COVID-19 vaccines and therapies at reduced cost. Such license agreements allow for expanded access in low- and middle-income countries, while also setting reasonable parameters so that patents and other IP rights are used to address the specific medical needs of the COVID-19 pandemic at hand, and not for other purposes. License agreements also allow for orderly technology transfer, including of unpatented “trade secret” information and other critical “know-how,” that may be essential to efficiently producing and scaling-up safe and effective versions of technologically complex vaccines and biologic drug products. Under the present TRIPS waiver proposal, however, member countries could try to exploit an extraordinarily broad scope of IP and copy patented technologies so long as they are “in relation to prevention, containment or treatment of COVID-19.” For example, under an expansive reading of the proposed waiver language, a member country could try to produce patented pharmaceutical compounds that have other indicated uses predating COVID-19, if such compounds had later been studied or experimentally used for potential symptomatic relief or antiviral activity in COVID-19 patients. The same risks may be faced by manufacturers of patented materials or devices that have multiple uses predating COVID-19, but also may be used as “personal protective equipment” or components thereof, or in other measures arguably relating to COVID-19 “prevention” or “containment.” At the same time, it is unclear how the proposed TRIPS waiver could provide the technology transfer and know-how critical for making the complex molecules and formulations constituting the various COVID-19 vaccines. Vaccine manufacture undertaken by an unauthorized party without the proper processes and controls could result in a different product that is potentially ineffective or results in unwanted health consequences. And even if an unauthorized manufacturer could overcome those substantial hurdles to reverse-engineer and scale up a safe and effective vaccine copy, it would likely take substantial time and a series of failures to do so. Notably, several of the original COVID-19 vaccine developers have recently faced low product yield and other manufacturing challenges during pre-commercial scale-up efforts and the initial months of commercial production.