## 1AC

### Framework

#### The meta-ethic is moral substitutability - only it can explain reasons for acting.

Sinnott-Armstrong 92 [Walter, professor of practical ethics. “An Argument for Consequentialism” Dartmouth College Philosophical Perspectives. 1992.]

A moral reason to do an act is consequential if and only if the reason depends only on the consequences of either doing the act or not doing the act. For example, a moral reason not to hit someone is that this will hurt her or him. A moral reason to turn your car to the left might be that, if you do not do so, you will run over and kill someone. A moral reason to feed a starving child is that the child will lose important mental or physical abilities if you do not feed it. All such reasons are consequential reasons. All other moral reasons are non-consequential. Thus, a moral reason to do an act is non-consequential if and only if the reason depends even partly on some property that the act has independently of its consequences. For example, an act can be a lie regardless of what happens as a result of the lie (since some lies are not believed), and some moral theories claim that that property of being a lie provides amoral reason not to tell a lie regardless of the consequences of this lie. Similarly, the fact that an act fulfills a promise is often seen as a moral reason to do the act, even though the act has that property of fulfilling a promise independently ofits consequences. All such moral reasons are non-consequential. In order to avoid so many negations, I will also call them 'deontological'. This distinction would not make sense if we did not restrict the notion of consequences. If I promise to mow the lawn, then one consequence of my mowing might seem to be that my promise is fulfilled. One way to avoid this problem is to specify that the consequences of an act must be distinct from the act itself. My act of fulfilling my promise and my act of mowing are not distinct, because they are done by the same bodily movements.10 Thus, my fulfilling my promise is not a consequence of my mowing. A consequence of an act need not be later in time than the act, since causation can be simultaneous, but the consequence must at least be different from the act. Even with this clarification, it is still hard to classify some moral reasons as consequential or deontological,11 but I will stick to examples that are clear. In accordance with this distinction between kinds of moral reasons, I can now distinguish different kinds of moral theories. I will say that a moral theory is consequentialist if and only if it implies that all basic moral reasons are consequential. A moral theory is then non-consequentialist or deontological if it includes any basic moral reasons which are not consequential. 5. Against Deontology So defined, the class of deontological moral theories is very large and diverse. This makes it hard to say anything in general about it. Nonetheless, I will argue that no deontological moral theory can explain why moral substitutability holds. My argument applies to all deontological theories because it depends only on what is common to them all, namely, the claim that some basic moral reasons are not consequential. Some deontological theories allow very many weighty moral reasons that are consequential, and these theories might be able to explain why moral substitutability holds for some of their moral reasons: the consequential ones. But even these theories cannot explain why moral substitutability holds for all moral reasons, including the non-consequential reasons that make the theory deontological. The failure of deontological moral theories to explain moral substitutability in the very cases that make them deontological is a reason to reject all deontological moral theories. I cannot discuss every deontological moral theory, so I will discuss only a few paradigm examples and show why they cannot explain moral substitutability. After this, I will argue that similar problems are bound to arise for all other deontological theories by their very nature. The simplest deontological theory is the pluralistic intuitionism of Prichard and Ross. Ross writes that, when someone promises to do something, 'This we consider obligatory in its own nature, just because it is a fulfillment of a promise, and not because of its consequences.'12 Such deontologists claim in effect that, if I promise to mow the grass, there is a moral reason for me to mow the grass, and this moral reason is constituted by the fact that mowing the grass fulfills my promise. This reason exists regardless of the consequences of mowing the grass, even though it might be overridden by certain bad consequences. However, if this is why I have a moral reason to mow the grass, then, even if I cannot mow the grass without starting my mower, and starting the mower would enable me to mow the grass, it still would not follow that I have any moral reason to start my mower, since I did not promise to start my mower, and starting my mower does not fulfill my promise. Thus, a moral theory cannot explain moral substitutability if it claims that properties like this provide moral reasons.

#### Non-consequentialist moral theories fail to explain.

Sinnott-Armstrong 92 [Walter, professor of practical ethics. “An Argument for Consequentialism” Dartmouth College Philosophical Perspectives. 1992.]

Of course, there are many other versions of deontology. I cannot discuss them all. Nonetheless, these examples suggest that it is the very nature of deontological reasons that make **deontological theories unable to explain moral substitutability**. This comes out clearly if we start from the other side and ask which properties create the moral reasons that are derived by moral substitutability. **What gives me a moral reason to start the mower is the consequences of starting the mower.** Specifically**, it has the consequence that I am able to mow the grass.** This reason cannot derive from the same property as my moral reason to mow the lawn unless what gives me a moral reason to mow the lawn is *its* consequences. **Thus any non-consequentialist moral theory will have to posit two distinct kinds of moral reasons: one for starting the mower, and another for mowing the grass. Once these kinds of reasons are separated, we need to understand the connection between them. But this connection cannot be explained by the substantive principles of the theory**. That is why all deontological theories must lack the explanatory coherence which is a general test of adequacy for all theories.

#### The standard is maximizing expected well-being.

Consequentialism SPEC: NEC (necessary enabler consequentialism) – all moral reasons for acts are provided by facts that the acts are necessary enablers for preventing death.

#### Prefer:

#### 1. Actor Specificity:

#### a. No act-omission distinction—governments are responsible for everything in the public sphere so inaction is implicit authorization of action: they have to yes/no bills, which means everything collapse to aggregation.

#### b. No intent-foresight distinction – the actions we take are inevitably informed by predictions from certain mental states, meaning consequences are a collective part of the will.

#### c. Comes first since different agents have different ethical standings. Takes out util calc indicts since they’re empirically denied and link turns them because the alt would be no action.

#### 2. Extinction comes first under any framework.

Pummer 15 [Theron, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford. “Moral Agreement on Saving the World” Practical Ethics, University of Oxford. May 18, 2015] AT

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; it is not the view that the latter don’t matter. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be undermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty. What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters, it is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)

#### a. Gateway issue - we need to be alive to assign value and debate competing moral theories.

#### b. no moral theory can allow for extinction because it means the end of value.

### Plan

**Plan: The member nations of the World Trade Organization ought to reduce intellectual property protections for COVID-19 medicines. If needed - we will defend trade sanctions as enforcement and a permanent waiver for patents.**

### Adv

#### Scenario 1 – Pandemics

#### Variants are increasingly more lethal – if unchecked they mean extinction. Global access to the vaccine is key.

**Kavanagh 21** Kevin. “The Delta Variant Is the Biggest Public Health Threat We Have Faced. Here's How to Beat It.” Journal, Louisville Courier Journal, 4 Aug. 2021, www.courier-journal.com/story/opinion/2021/08/04/delta-variant-biggest-public-health-threat-we-have-faced/5424054001/. //NCS-LB

Now faced with a fifth wave of COVID-19 about to suffocate our nation, many of us are starting to realize COVID-19 is here to stay. Herd immunity is no longer an option. Waves of variants are sweeping the world and learning how to evade immunity. SARS-CoV-2 has also learned how to infect a wide range of animal species, giving it a lasting reservoir to reinfect our communities. We must change our lives and adapt to this new reality; we need to be honest with ourselves but most importantly we need to protect and be honest with others. Individuality will not succeed with an ever-changing virus. The [delta variant](https://www.courier-journal.com/story/news/2021/07/26/covid-19-delta-variant-kentucky-how-to-watch-beshear-update/8090806002/) is the greatest public health threat our nation has ever faced, and it is just the harbinger of things to come, as the kappa and lambda variants are quietly waiting their turn. We cannot solely vaccinate our way out of this. We must also implement stringent public health strategies to slow down the spread and mutation of this virus, including universal access to N-95 masks and upgrading building ventilation. In that way, our pharmaceutical development and production can catch up with the emerging variants. The new mRNA vaccines are a medical miracle, and we can develop a new vaccine within weeks. The challenge is in producing and distributing hundreds of millions of doses and placing them into arms. Related:[Delta variant worries hospital leaders across Kentucky as beds fill with the unvaccinated](https://www.courier-journal.com/story/news/local/2021/08/02/delta-variant-covid-19-hospital-admissions-increase-across-kentucky/5415576001/) We need to be honest with the public. The public is keenly astute at ferreting out the truth and when they do our leaders lose credibility. The current vaccines prevent death and reduce hospitalizations; this is a huge plus and everyone needs to become vaccinated. But they also can cause breakthrough infections. [Data from Israel](https://www.nejm.org/doi/full/10.1056/NEJMoa2109072) reports that 19% of mild and asymptomatic vaccine breakthrough infections with the alpha variant had persistent symptoms at six weeks. [Multiple studies](https://www.webmd.com/lung/news/20200811/asymptomatic-covid-silent-but-maybe-not-harmless) have demonstrated CT scan changes in the lungs in approximately 50% of patients with asymptomatic infections. It also needs to be remembered that COVID-19 is as much a [heart and vascular disease](https://www.infectioncontroltoday.com/view/is-covid-19-primarily-a-heart-and-vascular-diseases) as it is a lung disease. Often myocarditis is initially asymptomatic, only presenting with symptoms decades later. Almost every organ of the body is affected by COVID-19, it is not the seasonal flu. The virus will continue to mutate and may eventually escape the vaccine’s protection. We need to remember that SARS one, the deadly virus that ravaged Asia in 2003, is a coronavirus which also uses the ACE2 receptor in cellular entry. Thus, our current COVID virus may undergo many more immunity evading iterations and still maintain its infectivity. The first step in successfully living with this virus is to stop the misinformation; it is actually placing the whole world at risk. Masks work. Yes, the size of the virus as measured by electron microscopy is much smaller than the filtration capacity of a high grade N95 mask, but the [viral particles](https://www.nejm.org/doi/full/10.1056/NEJMc2007800?query=featured_home) extruded by someone in the air are much larger, since they are coated with mucous and water. Masks mechanically block the larger particles and can even electrostatically capture the smaller ones. COVID-19 delta variant:[Here's how JCPS plans on keeping kids safe when classes begin](https://www.courier-journal.com/story/news/education/2021/08/03/covid-19-delta-variant-how-jcps-plans-keep-kids-safe-when-classes-begin/5404600001/) It is a numbers’ game. It is highly unlikely you will be infected by exposure to just one viron. The fewer virons you are exposed to, the less likely you are to develop an infection, and if you do the infection will probably be less severe. Much of the confusion we witnessed during previous COVID-19 waves was the result of misinformation, reduced access to health care and a patchwork availability of the vaccines. Our entire health care system needs to follow the same script and to be able to quickly and uniformly adapt to an ever-changing pandemic. The United States needs a nationwide system for public health education, testing, case tracking, treatment and vaccine rollout. To this end, the largest health care system in the United States is the Department of Veterans Affairs (VA). The VA has three well-known missions: research, education and clinical care. But what is not widely known is that the VA has a [fourth mission](https://youtu.be/oBtNJeoNW2k): to provide aid and support to the entire nation during health care emergencies. During the COVID-19 pandemic, the VA outsourced more than 1,000 health care staff to community nursing homes and non-VA facilities, and they hospitalized more than 400 non-veterans at VA facilities. The VA has also taken a leadership role in implementing effective COVID-19 strategies, exemplified by their being the first federal cabinet to require employee vaccinations. With the VA’s large infrastructure and fourth mission mandate, it is the obvious vehicle to implement a nationwide public health care system. Finally, we need to remember that infectious diseases have brought down civilizations and driven species to extinction. What makes our modern society different is our knowledge of science, but if we choose to ignore and not use our capabilities, we are then no better off than a tadpole. We need to embrace and invest in a new normal. This virus is not going to miraculously go away.

**Countries blocking waiver now - plan solves - WTO IP rules are the barrier to scaled-up vaccine production.**

**Pandey 21**, Ashutosh. “Rich Countries Block India, South Africa's Bid to Ban COVID Vaccine Patents.” DW.COM, 2 Apr. 2021, www.dw.com/en/rich-countries-block-india-south-africas-bid-to-ban-covid-vaccine-patents/a-56460175.

The World Trade Organization (WTO) talks on a proposal by India and South Africa to temporarily suspend intellectual property (IP) rules related to COVID-19 vaccines and treatments hit a roadblock on Thursday after wealthy countries balked at the idea, Germany's dpa news agency reported. The two developing countries say the IP waiver will allow drugmakers in poor countries to start production of effective vaccines sooner. India and South Africa had approached the global trade body in October, calling on it to waive parts of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). The suspension of rights such as patents, industrial designs, copyright and protection of undisclosed information would ensure "**timely access to affordable medical products including vaccines and medicines or to scaling-up of research, development, manufacturing and supply of medical products essential to combat COVID**-19," they said. The proposal was vehemently opposed by wealthy nations like the US and Britain as well as the European Union, who said that a ban would stifle innovation at pharmaceutical companies by robbing them of the incentive to make huge investments in research and development. This would be especially counterproductive during the current pandemic which needs the drugmakers to remain on their toes to deal with a mutating virus, they argue. The WTO talks are taking place as some wealthy countries face criticism for **cornering billions** of COVID shots — many times the size of their populations — while **leaving poor countries** struggling for supplies. **Experts say the global scramble for vaccines, or vaccine nationalism, risks prolonging the pandemic.** "We have to recognize that this virus knows no boundaries, it travels around the globe and the response to it should also be global. It should be based on international solidarity," said Ellen 't Hoen, the director of Medicines Law & Policy — a nonprofit campaigning for greater access to medicines. "Many of the large-scale vaccine manufacturers are based in developing countries. All the production capacity that **exists should be exploited**…and that does require the sharing of Not enough production capacity Supporters of the waiver, which include dozens of developing and least-developed countries and NGOs, said the WTO's IP rules were acting as a **barrier to urgent scale-up of production of vaccines** and other much needed medical equipment in poor countries.

#### Studies show that extinction rates for variants dramatically increase as viruses develop.

**Schiøler 21**, Henrik, et al. “Mathematical Modelling of Sars-Cov-2 Variant Outbreaks Reveals Their Probability of Extinction.” MedRxiv, Cold Spring Harbor Laboratory Press, 1 Jan. 2021, www.medrxiv.org/content/10.1101/2021.07.05.21260005v1.full.pdf+html.

Pandemic outbreaks have reentered as a global reality and threat to humanity with the transmission of an animal-adapted Corona virus to humans, first detected in Wuhan, China in late 2019, leading to the COVID-19 pandemic exhibiting frequent severe respiratory problems in humans. Early warnings of a global event were seen with SARS and avian flu [3, 7]. In both cases early containment measures proved successful, whereas for SARS-CoV-2 early containment failed and the strategy transferred to mitigation. This pattern has later been re-observed in almost all countries at the early stages of COVID-19 introduction across national borders. Lately, human-animal transmission has given rise to grave concerns regarding a re-ignition of the pandemic through 1 All rights reserved. No reuse allowed without permission. (which was not certified by peer review) is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. medRxiv preprint doi: https://doi.org/10.1101/2021.07.05.21260005; this version posted July 6, 2021. The copyright holder for this preprint NOTE: This preprint reports new research that has not been certified by peer review and should not be used to guide clinical practice. resistant mutations cultivated in animal reservoirs [9]. One such example is the discovery of the Cluster-5 mutation in humans transferred from farmed mink in the Danish fur industry during the summer of 2020 [2]. National and global health concerns triggered severe disease containment measures, such as the rapid culling of the entire Danish 17 million large stock of mink as well as relatively severe social- and travel-restrictions for seven municipalities in the North Denmark Region (approx. 281,000 people). Containment measures were, for various reasons, delayed for around four weeks, in which there were no observations of Cluster-5 mutations in a subset of polymerase chain reaction (PCR) tested samples subjected to whole genome sequencing (WGS). This has lead to the obvious question, for how long should Cluster-5 be absent from test samples before its extinction is sufficiently certain? The answer depends on the epidemiological behaviour of the disease during restrictions as well as the testing regime imposed in that period. We aim in this paper to provide a Bayesian model-based answer to this question which links epidemiological parameters as well as testing patterns and test results to the probability of disease extinction and early detection. Various modeling levels exist in epidemiology such as compartment models, aggregate Markov models, and individual Markov models [1]. Whereas the former two, including the well known SIR and SEIR models [5], are well suited to model the epidemic spread for large populations during mitigation, the latter provides higher precision for small amounts of infected during containment. Other recent investigations have been made to model the early epidemic evolution of SARS-CoV-2, employing auto-regressive modeling with a Bayesian approach to parameter estimation [8]. Such models provide mean value predictions but do not give the probabilistic output as requested above. The scale of genomic surveillance needed for early detection of newly emerging variants of concern (VoC) has been considered through a model of the sampling process including the PCR test quality parameters [10]. However, in this model, only the output model is considered, in contrast to our model, where also the epidemic dynamics are included. Furthermore, results are given as expected counts in contrast to the probabilistic results of our approach. A generalized Hidden Markovian model framework for epidemic evolution and test has also been employed [11]. One may consider the model class used in this paper as a subset of that model, tailored specifically to early epidemic development, which brings about a much required computational tractability even for large populations. We shall shortly introduce the development from individual models to compartment models to facilitate the transfer of model parameters between them. The model is generic and can therefore be used in other situations when pathogen mutations are entered from, e.g., animal reservoirs. 2 Results The derivation of the epidemic spread and measurement model was motivated by the spread of mink mutations in the North Denmark Region. Before returning to this, we will formulate the model and study its usability and robustness by running a number of intervention scenarios. In the following we will consider interventions as a combination of restrictions, bringing the reproduction number down, and intensified PCR and WGS sequencing. 2 All rights reserved. No reuse allowed without permission. (which was not certified by peer review) is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. medRxiv preprint doi: https://doi.org/10.1101/2021.07.05.21260005; this version posted July 6, 2021. The copyright holder for this preprint 2.1 Probability of extinction Assume a situation where we have observed y infected people carrying a variant we want to keep under control and an effective contamination strategy of infected people and their immediate contacts has been invoked. The question is now:, for how long shall we retain the restrictions to be reasonably sure that the virus has not spread? I.e., we want to calculate the following probability p(xk = 0 | y0 = y, y1 = 0, . . . , yk = 0), k = 1, 2, 3, . . . , where xk and yk are, respectively, the hidden (true) and observed number of infected people carrying the variant at time k. In the Methods section, we have formulated a discrete time hidden Markov model to model this situation where the development of the number of infected people, with the specific variant of interest, follows a birth-death process with death rate (herein recovery rate) γ and net reproduction rate R0. The net reproduction rate is defined as the ratio of the birth rate (herein infection rate) versus the death rate, i.e., R0 = β/γ. We assume a two-step testing strategy where nk of the population of size N, are PCR tested and mk of the PCR positive tests are WGS tested at time point k. In the following, we compute a number of scenarios which illustrate how various intervention strategies will influence the time until a certain probability of extinction has been reached, given the specific variant has not been observed for a given period of time. In all simulations, we assume a constant recovery time of two weeks, i.e. γ = 0.5, a population size of N = 600, 000, n = 10, 000 tests per week, and an initial number of infected people with the specific variant of 11 as well as a flat prior distribution on the number of specific cases. These numbers were picked to mimic the Cluster-5 outbreak in the North Denmark Region, where 11 cases were observed in a population of size approximately 600,000. Thereafter, we simulated increased restrictions by lowering stepwise the reproduction rate, R0, from 1.5 to 0.5. Finally, we studied increased WGS testing rate of positives between 25% and 100%. In Figure 1, Panel A shows the probability of extinction as a function of the number of weeks for increasing WGS ratio and a constant reproduction rate of R0 = 1.0, and Panel B shows the probability of extinction as function of the number of weeks for increasing reproduction rates and constant WGS rate of 0.25. Time to the probability of extinction for all scenarios can be seen in Table 1. From numerical results, we see that an increase in the ratio of WGS tests dramatically lowers the number of weeks from 42 to 25 before we can conclude a probability of extinction of 90%. We also noticed a counter intuitive non-monotone relationship between reproduction rate and number of weeks until a certain probability of extinction has been achieved. To investigate this further, we computed the number of weeks to a 85%, 90%, and 95% probability of extinction and depicted the number of weeks to extinction against increasing reproduction rates, ranging from 0.5 to 2.5, see Figure 2. From this we notice the maximum of weeks to probability of extinction emerging for reproduction rates R0 slightly less than one, and decreasing for higher values. We are aware that it is impossible to set all parameters for a given situation. We have therefore made an online Shiny App which can be used to compute the interested reader’s own scenarios, please refer to the Data availability section.

#### Reject their Pharma hacks – the waiver boosts vaccine capacity and distribution – ensures mass immunization and prevents future pandemics.

**Baker 21**, Brook. “Third-Way Proposals from Big Pharma and the WTO Are the Same-Old Way – Commercial Control of Supply, Price, and Distribution.” Health Gap, Apr. 2021, healthgap.org/wp-content/uploads/2021/05/Baker.The-Third-Way-is-the-Same-Old-Way-Final1.pdf. //JQ

Adopting the waiver would greatly change countries’ bargaining power with industry and, if need be, allow countries to authorize “generic” production of key COVID-19 health technologies to fulfill unmet need. It would give legal certainty for private and public investments in local and regional biopharmaceutical manufacturing capacity in the Global South. Moreover, if widely implemented and supported with investments, the waiver could allow the kinds of North-South and South-South cooperation that could result in the establishment of sustainable longer-term biopharmaceutical capacity operating at efficient economies-of-scale that would be able to address future pandemic threats and other unmet medical needs. Support for the waiver has grown by leaps and bounds with 60 countries now co-sponsoring and another 60 or so countries indicating support. In addition, at least 10 US Senators and another 100 Members of Congress have supported the proposal as have over 400 Members of the European Parliament and national parliamentarians. Likewise, the Pope, 175 former heads of state and Nobel Prize winners, and hundreds of civil society organizations in the U.S. alone have supported the waiver proposal. The end goal of these initiatives is to move the tools needed to end the pandemic to the global commons instead of private enclosures. More specifically, the goal is to increase and distribute sustainable global manufacturing capacity and enable full and open technology transfer of mRNA and other vaccine platforms, antivirals, and biologic medicines including monoclonal antibodies. Related capacity could also be built for other medical supplies including PPE and diagnostics. This expanded capacity would in turn lead to greater self- sufficiency and more equitable access than the current rightholder-dominated approach. In instances where increased competition did not lower prices, additional price control measures could be adopted. A Renewed Industry Offensive and “Third Way” Proposals Although industry initially responded to the waiver proposal with shrugs and quips that it was “nonsense”, the rallying of support and the openness of the new Biden administration to consider the merits of the proposal has led to an industry counteroffensive. Strident op-eds and letters of alarm from PhRMA, BIO, U.S. Chamber of Commerce and others simultaneously argue that waiving IP won’t help expand supply but that protecting IP is essential to the COVID-19 response and the survival of the industry. In addition to stridently defending IP, industry asserts two other easily refuted arguments. First, Big Pharma claims that it has amassed all existing manufacturing capacity and that it has global supply needs totally under control. It estimates it can manufacture 8, 10, 12, or even 14 billion doses of vaccines in 2021. However, vaccine manufacturers were able to produce only 4% (31 million doses) of what they predicted they could produce by the end of the 2020. In the first 2+ months of 2021 (through March 5, 2021), all manufacturers, including Russian and Chinese ones, had produced only 413 million vaccine doses. Even by early April, fewer than 1 billion doses have been manufactured. Therefore it is not logical to expect that industry will be able to increase production 8-14 fold in the next nine months of 2021. Similarly, although it argues that it has scoured the global landscape and exhausted all potential sources of supply, vaccine manufacturers have rejected offers to produce additional vaccines from quality assured manufacturers in Canada, Bangladesh, and Denmark. Likewise, they have seemingly ignored unused capacity elsewhere. Second, after entering into multiple technology access agreements with contract manufacturers and building their own capacity in a few short months, Big Pharma argues that additional technology transfer to other unutilized producers would be too difficult and time consuming. To bolster this argument, Big Pharma characterizes LMIC manufacturers as technologically backward and substandard even though 72 out of 154 WHO prequalified vaccines are produced by manufacturers from developing countries, including India, China, Brazil, Cuba, Thailand, Senegal, and Indonesia. This “quality slander” occurs at the same time that vaccine rightholders have entered into multiple industry-controlled contract manufacturing agreements with companies in India and other developing countries. As part of its offensive, industry helped to organize the previously mentioned Manufacturing and Supply Chain Summit where, in its background paper, it touted illusory claims of manufacturing capacity from leading candidate vaccine producers but bemoaned upstream supply bottlenecks. Simultaneously, the Director General of the WTO proposed to pursue a “Third Way” proposal in the WTO that would help voluntary match-making “on mutually agreeable terms” between vaccine manufacturers and potential manufacturing partners. In response, on March 9, 2021, Australia, Canada, Chile, Columbia, New Zealand, Norway, and Turkey tried to deflect attention from the waiver proposal and requested to the WTO General Council that the Director General “promptly convene and hold discussion with both vaccine developers and vaccine manufacturers, as well as developers and manufacturers of other COVID-19-related medical products” to make use of unused or underutilized production capacity through mutually beneficial licensing and technology transfer agreements. At the same time, industry leaders and lobbyists have swarmed Washington and Brussels to argue their case with political leaders, simultaneously opposing the waiver but asking for additional government support. This request for resources has already resulted in at least one agreement by the Quad Alliance (U.S., India, Japan, and Australia) to invest resources in an Indian manufacturer, Biological E Ltd., to make additional doses of Johnson & Johnson’s vaccine to meet a portion of demand in Indo-Pacific region. The most recent instantiation of the industry’s Third Way approach is a proposal to create a COVID Vaccine Capacity Connector in the ACT-A Vaccine Pillar that would “(1) [connect] manufacturers to alleviate bottle necks, particularly in the fill-finish step; (2) promote bilateral technology transfers under license; and (3) facilitate multilateral technology transfer to multiple manufacturers through a technology hub approach.” The first two approaches are clearly the same-old, industry-controlled way. The third approach, originating within WHO, is potentially more promising and would seek to duplicate prior successful efforts to use a tech transfer hub that helped diffusion and expansion of influenza vaccine manufacturing capacity. Conclusion There is no doubt that the fundamental barrier to achieving global vaccination coverage is inadequate supply and skewed distribution. That problem persists because governments have left control over vaccine technologies, supply, price, and distribution solely to pharmaceutical companies. With evidence to date, there is no reason to trust industry’s self- serving assertions about their proprietary vaccine manufacturing capacity given the manufacturing mishmashes and production shortfalls we have already witnessed. To make things even worse, Europe and now India are restricting vaccine exports and the U.S. has not allowed export of any domestically produced vaccines except for 4 million doses of the Oxford/AstraZeneca vaccine to neighboring Mexico and Canada. Instead of relying on industry’s promises, the world can rely instead on common sense – an informed common sense that industry will continue to undersupply, overprice, and underserve need in poorer regions of the world. The resulting shortfalls in immunization will directly cause additional deaths, economic losses, and social disruption. Shortfalls also create a breeding ground for new variants, with the risk that already scarce vaccine capacity will be split disproportionately again between prioritizing the resurgent needs of rich countries for booster and new-variant shots while ignoring the needs of the other 80+% of the global population. This dismal prospect will thereafter extend in the future, where inadequate capacity will undermine efforts to respond to future pandemics by ignoring needs in developing countries. Countries must reject third-way/same-way, industry-controlled solutions. The world must unify to meet the urgency of the pandemic. If IP rightholders stand in the way of increased supply, affordable prices, and equitable access, their rights must be overridden so that life- saving health technologies can enter the public sphere where they belong. Industry must be driven to the bargaining table, even if they are also granted incentives for open technology transfer and even as governments and others invest in new and repurposed manufacturing capacity.

#### Scenario 2 - WTO Credibility

#### WTO credibility is draining now - the plan is key to revamp the organization as an international trade dispute mechanism.

**Meyer 21**, David. “The WTO's Survival Hinges on the COVID-19 VACCINE Patent Debate, Waiver Advocates Warn.” Fortune, Fortune, 18 June 2021, fortune.com/2021/06/18/wto-covid-vaccines-patents-waiver-south-africa-trips/.

The World Trade Organization knows all about crises. Former U.S. President Donald Trump threw a wrench into its core function of resolving trade disputes—a blocker that President Joe Biden has not yet removed—and there is widespread dissatisfaction over the fairness of the global trade rulebook. The 164-country organization, under the fresh leadership of Nigeria's Ngozi Okonjo-Iweala, has a lot to fix. However, **one crisis is more pressing than** the **others**: the battle over COVID-19 vaccines, and whether the protection of their patents and other intellectual property should be temporarily lifted to boost production and end the pandemic sooner rather than later. According to some of those pushing for the waiver—which was originally proposed last year by India and South Africa—**the WTO's future rests on what happens next.** "The credibility of the WTO will depend on its ability to find a meaningful outcome on this issue that truly ramps-up and diversifies production," says Xolelwa Mlumbi-Peter, South Africa's ambassador to the WTO. "Final nail in the coffin" The Geneva-based WTO isn't an organization with power, as such—it's a framework within which countries make big decisions about trade, generally by consensus. It's supposed to be the forum where disputes get settled, because all its members have signed up to the same rules. And one of its most important rulebooks is the Agreement on Trade-Related Aspects of Intellectual Property Rights, or TRIPS, which sprang to life alongside the WTO in 1995. The WTO's founding agreement allows for rules to be waived in exceptional circumstances, and indeed this has happened before: its members agreed in 2003 to waive TRIPS obligations that were blocking the importation of cheap, generic drugs into developing countries that lack manufacturing capacity. (That waiver was effectively made permanent in 2017.) Consensus is the key here. Although the failure to reach consensus on a waiver could be overcome with a 75% supermajority vote by the WTO's membership, this would be an unprecedented and seismic event. In the case of the COVID-19 vaccine IP waiver, it would mean standing up to the European Union, and Germany in particular, as well as countries such as Canada and the U.K.—the U.S. recently flipped from opposing the idea of a waiver to supporting it, as did France. **It's a dispute between countries, but the result will be on the WTO as a whole**, say waiver advocates. "If, in the face of one of humanity's greatest challenges in a century, the WTO functionally becomes an obstacle as in contrast to part of the solution, **I think it could be the final nail in the coffin"** **for the organization**, says Lori Wallach, the founder of Public Citizen's Global Trade Watch, a U.S. campaigning group that focuses on the WTO and trade agreements. "If the TRIPS waiver is successful, and people see the WTO as being part of the solution—saving lives and livelihoods—**it could create goodwill and momentum to address what are still daunting structural problems."** Those problems are legion. Reform needs Top of the list is the WTO's Appellate Body, which hears appeals in members' trade disputes. It's a pivotal part of the international trade system, but Trump—incensed at decisions taken against the U.S. —blocked appointments to its seven-strong panel as judges retired. The body became completely paralyzed at the end of 2019, when two judges' terms ended and the panel no longer had the three-judge quorum it needs to rule on appeals. Anyone who hoped the advent of the Biden administration would change matters was disappointed earlier this year when the U.S. rejected a European proposal to fill the vacancies. "The United States continues to have systemic concerns with the appellate body," it said. "As members know, the United States has raised and explained its systemic concerns for more than 16 years and across multiple U.S. administrations." At her confirmation hearing in February, current U.S. Trade Representative Katherine Tai reiterated those concerns—she said the appellate body had "overstepped its authority and erred in interpreting WTO agreements in a number of cases, to the detriment of the United States and other WTO members," and accused it of dragging its heels in settling disputes. "Reforms are needed to ensure that the underlying causes of such problems do not resurface," Tai said. "While the U.S. [has] been engaging [with the WTO] it hasn't indicated it would move quickly on allowing appointments to the Appellate Body," says Bryan Mercurio, an economic-law professor at the Chinese University of Hong Kong, who opposes the vaccine waiver. "This is not a good sign. In terms of WTO governance, it's a much more important step than supporting negotiations on an [intellectual property] waiver." It's not just the U.S. that wants to see reform at the WTO. In a major policy document published in February, the EU said negotiations had failed to modernize the organization's rules, the dispute-resolution system was broken, the monitoring of countries' trade policies was ineffective, and—crucially—"the trade relationship between the U.S. and China, two of the three largest WTO members, is currently largely managed outside WTO disciplines." China is one of the key problems here. It became a WTO member in 2001 but, although this entailed significant liberalization of the Chinese economy, it did not become a full market economy. As the European Commission put it in February: "The level at which China has opened its markets does not correspond to its weight in the global economy, and the state continues to exert a decisive influence on China's economic environment with consequent competitive distortions that cannot be sufficiently addressed by current WTO rules." "China is operating from what it sees as a position of strength, so it will not be bullied into agreeing to changes which it sees as not in its interests," says Mercurio. China is at loggerheads with the U.S., the EU and others over numerous trade-related issues. Its rivals don't like its policy of demanding that Chinese citizens' data is stored on Chinese soil, nor do they approve of how foreign investors often have to partner with Chinese firms to access the country's market, in a way that leads to the transfer of technological knowhow. They also oppose China's industrial subsidies. Mercurio thinks China may agree to reforms on some of these issues, particularly regarding subsidies, but "only if it is offered something in return." All these problems won't go away if the WTO manages to come up with a TRIPS waiver for COVID-19 vaccines and medical supplies, Wallach concedes. "**But**," she adds, "**the will and the good faith to tackle these challenges is increased enormously if the WTO has the experience of being part of the solution, not just an obstacle."** Wallach points to a statement released earlier this month by Asia Pacific Economic Cooperation (APEC) trade ministers, which called for urgent discussions on the waiver. "The WTO must demonstrate that global trade rules can help address the human catastrophe of the COVID-19 pandemic and facilitate the recovery," the statement read in its section about WTO reform. Okonjo-Iweala's role The WTO's new director general, whose route to the top was unblocked in early 2021 with the demise of the Trump administration, is certainly keen to fix the problems that contributed to the early departure of her predecessor, Brazil's Robert Azevedo. "We must act now to get all our ambassadors to the table to negotiate a text" on the issue of an IP waiver for COVID vaccines, Ngozi Okonjo-Iweala, director general of the World Trade Organization, has said. Dursun Aydemir—Anadolu/Bloomberg/Getty Images Earlier this week, when the U.S. and EU agreed a five-year ceasefire in a long-running dispute over Boeing and Airbus aircraft subsidies, Okonjo-Iweala tweeted: "With political will, we can solve even the most intractable problems." However, Mercurio is skeptical about her stewardship having much of an effect on the WTO's reform process. "Upon taking [over she] stated it was time for delegations to speak to each other and not simply past each other, but at the recent General Counsel meeting delegations simply read prepared statements in what some have described as the worst meeting ever," he says. "On the other hand, Ngozi is very much someone who will actively seek solutions to problems, and in this way different to her predecessor. If the role of mediator is welcomed, she could have an impact not in starting discussions but in getting deals over the finish line."

#### Perception of WTO inaction pushes states out and decks credibility - surges protectionism.

**Bradford 10** - Assistant Professor, University of Chicago Law School (Anu, “When the WTO Works, and How It Fails,” 51 Va. J. Int'l L. 1)//BB

Finally, while some attempts to conclude the Doha Round have failed because there were too many controversial issues, more recent rounds have failed partly because of the lack of inclusion of issues that would provide satisfactory net gains to all parties. The Doha negotiation agenda has now been stripped of much of its initial ambition, as states have narrowed the agenda in an effort to save the failing round. Thus, when states perceive the net benefits of a WTO round as inadequate, they are likely to **abandon the WTO** and pursue more substantial commitments with a **smaller group of like-minded trading partners**. Going forward, where does this leave the prospect of cooperation within the WTO? One possibility is that governments have already picked the low-hanging fruit and thereby satisfied the most salient needs of their powerful interest groups, leaving a dwindling pool of uncertain and contested benefits for states to negotiate. These remaining benefits are also more difficult for distinctly heterogonous trade powers to agree upon. This situation would marginalize the WTO's role with respect to future liberalization commitments and leave the institution in the role of adjudicating disputes stemming from existing agreements. 224Link to the text of the note This scenario suggests that the WTO may well have met its limits and that we are unlikely to see states incorporate new agreements into its framework. Another scenario is that the gains available through bilateral and regional trade agreements do not make the WTO obsolete. Under this scenario, one assumes that protectionism resurges and continues to span across global markets. States erect new trade barriers. Eliminating them creates losers and causes resistance, which only the WTO's facilitation of transfer payments can overcome. Opportunistic behavior continues to characterize many areas of cooperation. In these areas, the WTO is likely to remain a useful forum in which to negotiate enforceable commitments among many states. Indeed, states have few alternatives to the WTO. This view predicts that the WTO will remain the central pillar of the world trade system and continue to attract the negotiation of new issues under its umbrella. If states continue to seek trade liberalization through the WTO, however, they need to carefully weigh the costs and [56] benefits of its current decision-making structures, including its insistence on the single undertaking and its requirement that all states need to sign on to all agreements. Under either scenario, the WTO's recent inability to further its liberalization agenda highlights the need for a more focused debate on the institution's capabilities, goals, and priorities. The future prospects for cooperation within the WTO continue to **hinge** on the WTO's perceived relevance in maintaining and strengthening free trade. The discussion above not only helps shed light on the WTO's ability to foster international agreements thus far, but it may also provide a starting point for a discussion on whether and how the institution might serve states' future needs in an increasingly complex economic and political landscape.

#### Stable international trade networks prevents nuclear war and secures alliances – best theoretical studies.

**Jackson 14** (Matthew O. Jackson, William D. Eberle Professor of Economics at Stanford and Stephen M. Nei, PhD Student in Economics at Stanford, “Networks of Military Alliances, Wars, and International Trade”, October 2014, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2389300>)

This instability provides insights into the constantly shifting structures and recurring wars that occurred throughout the nineteenth and first half of the twentieth centuries.6 **Wars**, however, **have greatly subsided in parallel with the huge increase of trade** (partly coincidental with the introduction of containerized shipping in the 1960s): between 1820 and 1959 each pair of countries averaged .00056 wars per year, while from 1960 to 2000 the average was .00005 wars per year, less than one tenth as much. We see this pattern quite clearly in Figure 1.7 These changes also follow the advent of nuclear weapons, which impacted the technology of war. Indeed, we show how nuclear weapons can lead to some changes in stability, but does not generate peace on its own. Indeed, in order to capture the actual patterns that have emerged one must add other considerations - such as trade considerations - since the base model shows that networks of **alliances would not be stable with nuclear weapons but without trade**.8¶ Thus, the second part of our analysis is to enrich the base model to include international trade. Indeed, there has been a rapid increase in global trade since World War II (partly coincident with the growth of container shipping among other stimuli). The empirical relationship between war and trade is an active area of research, with strong suggestions (e.g., Martin, Mayer, and Thoenig (2008)) that network concerns may be important. So, we introduce a concept of a network of alliances being war and trade stable, which allows countries to form alliances for either economic or military considerations. In this richer model, an alliance allows countries to trade with each other and to coordinate military activities, and so can be formed for either reason. This restores existence of networks of alliances that are stable against the addition or deletion of alliances. **Trade provides two helpful incentives**: first it provides economic motivations to maintain **alliances**, and the resulting denser network of alliances then has a **deterrent effect**; and second, it can **reduce the incentives of a country to attack another** since trade will be disrupted. This **reduces the potential set of conflicts** and, together with the denser networks, allows for a rich family of stable networks that can exhibit structures similar to networks we see currently.¶ We provide some results on the existence and structure of war and trade stable networks of alliances, showing that structures similar to those observed over the past few decades are economically stable under apparently reasonable parameters. It is important to note that another dramatic change during the post-war period was the introduction of nuclear weapons, which changes the technology of war and is generally thought to have greatly increased the defensive advantage to those with such weapons.9 Our model suggests that although world-wide adoption of nuclear weapons could stabilize things in the absence of trade, it would result in an empty network of alliances as the stable network. To explain the much denser and more stable networks in the modern age along with the paucity of war in a world where nuclear weapons are limited to a small percentage of countries, our model points to the enormous growth in trade as a big part of the answer. We close the paper with some discussion of this potential role that the **growth in trade has played in reducing wars over the past half century**, and how this relates to the advent of the nuclear age.¶ Before proceeding, let us say a few words about how this paper contributes to the study of war. The literature on war provides many rationales for why wars occur. Our analysis here fits firmly into what has become a “rationalist” tradition based on cost and benefit analyses by rational actors, with roots seen in writings such as Hobbes (1651) Leviathan, and has become the foundation for much of the recent international relations literature.10¶ To our knowledge, **there are no previous models of conflict that game-theoretically model networks of alliances between multiple** agents/**countries based on costs and benefits of wars**. 11 There are previous models of coalitions in conflict settings (e.g., see Bloch (2012) for a survey). Here, network structures add several things to the picture. Our model is very much in a similar rationalist perspective of the literature that examines group conflict (e.g., Esteban and Ray (1999, 2001); Esteban and Sakovicz (2003)), but enriching it to admit network structures of alliances and of international trade. This allows us to admit patterns that are consistent with the networks of alliances that are actually observed, which are far from being partitions (e.g., the U.S. is currently allied with both Israel and Saudi Arabia, Pakistan and India, just to mention a couple of many prominent examples). More importantly, our Theorem 3 provides a first model in which such non-partitional such structures are stable and provide insight into peace. Moreover, as we already mentioned above, the observed patterns of wars and of alliances are not partitional, and so this provides an important advance in moving the models towards matching observed patterns of wars, trade and alliances.¶ Our model thus serves as a foundation upon which one can eventually build more elaborate analyses of multilateral interstate alliances, trade, and wars. It is also important to emphasize that the network of international trade is complex and can in fact be stable (and prevent conflict) precisely because it cuts across coalitions. This is in contrast to coalitional models that generally predict only the grand coalition can be stable or that very exact balances are possible (e.g., see Bloch, Sanchez-Pages, and Soubeyran (2006)). Again, this is something illustrated in our Theorem 3, and which does not exist in the previous literature. Finally, **our model illuminates the relationships between international trade, stable network structures, and peace**, something not appearing in the previous literature - as the previous literature that involves international trade and conflict generally revolves around bilateral reasoning or focuses on instability and armament (e.g., Garfinkel, Skaperdas, and Syropoulos (2014)) and does not address the questions that we address here.¶ The complex relationship between trade and conflict is the subject of a growing empirical literature (e.g., Barbieri (1996); Mansfield and Bronson (1997); Martin, Mayer, and Thoenig (2008); Glick and Taylor (2010); Hegre, Oneal, and Russett (2010)). The literature not only has to face challenges of endogeneity and causation, but also of substantial heterogeneity in relationships, as well as geography, and the level of conflict. The various correlations between conflict and trade are complex and quite difficult to interpret, **and a model such as ours that combines military and economic incentives**, and others that may follow, **can provide some structure with which to interpret** some of the **empirical observations**, as we discuss in the concluding remarks.

**Credibility solves nuclear war – trade binds opposing leaders together and deters conflict.**

**Hamann 09**, Georgia**.** “Replacing Slingshots with Swords: Implications of the Antigua-Gambling 22.6 Panel Report for Developing Countries and the World Trading System,” 2009

**Voluntary compliance with WTO rules** and procedures is of the utmost importance **to the international trading system**.'0 0 Given the increasingly globalized market, the coming years will see an increase in the importance of the WTO **as a cohesive force and arbiter of disputes that likely will become more frequent and injurious**. **01' The work of the WTO cannot be overstated in a nuclear-armed world,** as the body continues to promote respect and even amity among nations with opposing philosophical goals or modes of governance. 10 2 Demagogues in the Unites States may decry the rise of China as a geopolitical threat, 0 3 and extremists in Russia may play dangerous games of brinksmanship with other great powers, **but trade keeps politicians' fingers off "the button**. ' 10 4 **The WTO offers an astounding rate of compliance** for an organization with no standing army and no real power to enforce its decisions, suggesting that governments recognize the value of maintaining the international construct of the WTO. 105 **In order to promote voluntary compliance, the WTO must maintain a high level of credibility**. 106 Nations must perceive the WTO as the most reasonable option for dispute resolution or fear that the WTO wields enough influence to enforce sanctions. 10 7 The arbitrators charged with performing the substantive work of the WTO by negotiating, compromising, and issuing judgments are keenly aware of the responsibility they have to uphold the organization's credibility. 108

#### Extinction – nuke war fallout creates Ice Age and mass starvation.

Steven **Starr 15**. “Nuclear War: An Unrecognized Mass Extinction Event Waiting To Happen.” Ratical. March 2015. <https://ratical.org/radiation/NuclearExtinction/StevenStarr022815.html> TG

A war fought with 21st century strategic nuclear weapons would be more than just a great catastrophe in human history. If we allow it to happen, such a war would be a mass extinction event that [ends human history](https://ratical.org/radiation/NuclearExtinction/StarrNuclearWinterOct09.pdf). There is a profound difference between extinction and “an unprecedented disaster,” or even “the end of civilization,” because even after such an immense catastrophe, human life would go on. But extinction, by definition, is an event of utter finality, and a nuclear war that could cause human extinction should really be considered as the ultimate criminal act. It certainly would be the crime to end all crimes. The world’s leading climatologists now tell us that nuclear war threatens our continued existence as a species. Their studies predict that a large nuclear war, especially one fought with strategic nuclear weapons, would create a post-war environment in which for many years it would be too cold and dark to even grow food. Their findings make it clear that not only humans, but most large animals and many other forms of complex life would likely vanish forever in a nuclear darkness of our own making. The environmental consequences of nuclear war would attack the ecological support systems of life at every level. Radioactive fallout produced not only by nuclear bombs, but also by the destruction of nuclear power plants and their spent fuel pools, would poison the biosphere. Millions of tons of smoke would act to [destroy Earth’s protective ozone layer](https://www2.ucar.edu/atmosnews/just-published/3995/nuclear-war-and-ultraviolet-radiation) and block most sunlight from reaching Earth’s surface, creating Ice Age weather conditions that would last for decades. Yet the political and military leaders who control nuclear weapons strictly avoid any direct public discussion of the consequences of nuclear war. They do so by arguing that nuclear weapons are not intended to be used, but only to deter. Remarkably, the leaders of the Nuclear Weapon States have chosen to ignore the authoritative, long-standing scientific research done by the climatologists, research that predicts virtually any nuclear war, fought with even a fraction of the operational and deployed nuclear arsenals, will leave the Earth essentially uninhabitable.

#### The plan is needed to preserve and continue global trade norms, deter protectionism, and confront global crises.

**González 20**, Anabel **“**Revitalising Multilateralism: Pragmatic Ideas for the New WTO Director-General.” VOX, 10 Nov. 2020, voxeu.org/content/revitalising-multilateralism-pragmatic-ideas-new-wto-director-general.

EXTRAORDINARY TIMES DEMAND EXTRAORDINARY ACTION As of 2 November 2020, there are 46.9 million COVID-19 cases across all regions, with the number of deaths exceeding 1.2 million, and rising.2 The economic and social impacts of the pandemic and its containment measures are not less daunting. Global growth is estimated at -4.9 in 2020, with over 95% of countries projected to have negative per capita income growth (IMF 2020). Trade volumes are expected to decrease by between 13% and 32% from last year,3 while foreign direct investment flows could plunge by up to 40% (UNCTAD 2020). Is it estimated that the equivalent of 555 million jobs have been lost in the first half of this year (ILO 2020), which in turn could push up to 100 million more people into extreme poverty and would almost double the number of persons suffering from acute hunger (FAO 2020). While there is some evidence that goods trade may be rebounding and that the worst-case trade scenario projected in April could be averted (CPB 2020, WTO 2020a), the recovery from the deepest global recession since World War II will depend on the sustained and effective containment of the virus and the quality of government policies. The World Bank/IMF Development Committee warned that the pandemic has the potential to erase development gains for many countries (World Bank 2020a). Some consequences may also be long-lasting, such as lower investment, erosion of human capital, and a retreat from global trade and supply linkages (World Bank 2020b). It is no understatement to say these are extraordinary times. In many countries, governments are providing significant levels of fiscal support to try to stabilise their economies, sustain companies and minimise the impact on workers; in many others, limited fiscal space and informality constraint governments’ capacity to mitigate the damage. For advanced and developing economies alike, trade is a powerful, cost-effective tool to alleviate the devastating effects of COVID-19 on the health and economic fronts. And yet, protectionism is gaining an upper hand, deepening some of pre-pandemic confrontations that were already threatening the global economy. The short-term response to the virus and longer-term growth prospects depend on strong multilateral cooperation to scale back obstacles to trade and investment, increase business certainty and leverage opportunities which the pandemic has accelerated in areas like the digital economy. **It is also needed to preserve stable and coordinated international relations to avoid that heavy threats implicit in the pandemic could result in catastrophic disorders or conflicts** (Jean 2020). But it will not happen automatically. Unless governments accelerate their efforts to collaborate, growing protectionism and increased distortions to global value chains (GVCs) risk being a by-product of the virus, at the same time further exacerbating its negative implications. **This demands extraordinary action.** This chapter addresses the question of what role for trade ministers at the WTO in times of crises with a view to activating global cooperation to overcome COVID-19. In addition to the introductory section, the second section explores the need to reactivate the WTO to underpin collaboration among governments, the third section argues that trade ministers should call the shots during crisis, the fourth section suggests eight actions for ministers to rein in protectionism and mitigate further damage, the fifth section refers to the mechanics on how and when to do it, and a final section offers concluding remarks. **REACTIVATE THE WTO** Trade needs to be part of the response to COVID-19 and its upshots, and countries cannot afford the WTO, hobbled as it has been lately, to muddle through. **Moreover, as the world confronts more frequent and severe profound shocks such as financial crises, terrorism, extreme weather and pandemics** (McKinsey Global Institute 2020), **the WTO needs to step up its role during systemic crises.** **The fact that the organisation has been faltering, that there is a leadership vacuum and that distrust runs high among major traders will not make it any easier.** Exacerbated tensions related to the pandemic can only add to the feeling that WTO rules have been conceived for a very different context, increasing the risk of a loss of legitimacy (Jean 2020). **This is not about a major reset of the WTO. It is about (re)activating the organisation to serve its members as they combat the devastating impact of the pandemic and the global recession**. The WTO needs broader reform, in particular to address structural changes in the global economy. While extremely important, this discussion should not hamper the ability of the WTO to deliver at times of systemic crisis. Moreover, should the WTO – or more accurately, its members – demonstrate they can actually rise to the occasion in the context of COVID-19, **they will also contribute to increasing trust levels** **on the ability of the organisation to produce results**. The starting point is a shift in mindset: governments need to understand that international trade is not a problem in the crisis, but rather a core element of the solution (Baldwin and Evenett 2020). Take the shortages of medical supplies. There are three methods of assuring supply: stockpiling, investments in manufacturing capacity and trade. Of these options, relying on international trade is the most efficient and economic choice, provided the WTO can help assure security of this method of supply (Wolff 2020a). To be sure, many nations have taken unilateral steps to facilitate trade, especially in medical supplies and medicines. The Global Trade Alert reports that while 91 jurisdictions have adopted a total of 202 export controls on these goods since the beginning of 2020, 106 jurisdictions have executed 229 import policy reforms on these goods over the same period.4 After initial border closures, some neighbouring countries are beginning to facilitate the cross-border flow of goods. At the regional level and among subsets of countries, governments have issued different statements to keep trade lanes open and supply chains moving (see Table A1 in the Annex). After a tepid declaration from G20 leaders, trade ministers reaffirmed their determination to cooperate and coordinate to mitigate the impact of the COVID-19 pandemic on trade and investment and to lay a solid foundation for a global economic recovery. They also endorsed a set of short-term collective actions on trade regulation, trade facilitation, transparency, operation of logistics networks and support for small enterprises, and a group of longer-term actions on WTO reform, GVC resilience and investment; monitoring of implementation was left to senior officials (G20 2020). These actions are positive and reflect the political will of governments to collaborate to some extent – even if they have not fully countered the flurry of barriers and restrictions surrounding trade in critical medical gear. They are no substitute for trade cooperation at the global level, either. In the case of medical products, for example, the EU, the US and China account for almost three-quarters of world exports (WTO 2020b); cooperation initiatives that do not include these members would fall short on impact. The venue for cooperation should be global and open to all, even if not all 164 WTO members opt to engage in all initiatives. TRADE MINISTERS SHOULD CALL THE SHOTS DURING CRISES Challenges notwithstanding, governments need to act now to empower the WTO to play an active part in coordinating the response to the pandemic. The WTO is more than an organisation immersed in myriad drama on the shores of Lake Geneva; it is a solid framework for global trade cooperation. **It is in countries’ interest to preserve the relevance of the WTO;** its role can be critical in helping members help themselves. In a member-driven organisation such as the WTO, the role of the Director-General and the Secretariat is important and can and should be enhanced, for example with greater power of initiative and strengthened monitoring and analytics capabilities. The WTO dedicated page on the pandemic is a step in the right direction.5 But the ultimate responsibility to provide direction and act rests with governments. The WTO is nothing more and nothing less than the collectivity of its members (Steger 2020), a point that is frequently forgotten in the public discourse. Without strong leadership, frequent engagement and serious interest among members in addressing its challenges, the WTO itself cannot deliver results (Cutler 2020). Paraphrasing VanGrasstek (2013), the multilateral trading system receives its inspiration from economists and is shaped primarily by lawyers, but it can only operate within the limits set by politicians.

#### Vaccine agreement is key – but negotiating business positions hinder it – the plan creates fair vaccine distribution and WTO unity.

**Baschuk 21**, Bryce. “WTO Chief Pursues a ‘Hectic’ Agenda to Fix World Trade’s Referee.” Bloomberg.com, Bloomberg, 27 Apr. 2021, www.bloomberg.com/news/articles/2021-04-27/wto-chief-pursues-a-hectic-agenda-to-fix-world-trade-s-referee.

The head of the World Trade Organization **raised an alarm about the credibility of the multilateral trading system**, urging leaders to act fast to bolster the global economy with steps like fairer vaccine distribution and cooperate to resolve longer-term problems like overfishing. During her first two months, WTO Director-General Ngozi Okonjo-Iweala has met with trade ministers around the globe to communicate a message that **the WTO is important, it needs to be reformed and it needs to deliver results.** So far, she says the reception from world leaders has been positive, but quickly translating that goodwill into substantive outcomes during a global pandemic is just as daunting as she anticipated. “The word I would use to describe it is absolutely hectic,” Okonjo-Iweala said in a phone interview on Tuesday when asked about her first few months in the job. “The challenges we thought were there are there and getting an agreement is not as easy because of longstanding ways of negotiating business positions.” Read More: Arcane WTO Pact Moves to Center of Vaccine Debate: Supply Lines Countries need to move past the notion that one country’s gain in international commerce is another’s loss, she said. “We need to break out of the zero-sum deadlock,” Okonjo-Iweala said. “We need to remind the countries and members that the WTO is here to deliver for people. **We can’t take 20 years to negotiate something**.” Okonjo-Iweala said **her top priority is to use trade to alleviate the pandemic** and said her recent meeting with trade ministers and vaccine manufacturers provided a positive step in the right direction. ‘More Pragmatism’ “That meeting yielded quite a lot,” she said. “I see more pragmatism on both sides.” An important component of the WTO’s trade and health agenda is a proposal from India and South Africa that seeks to temporarily waive enforcement of the WTO’s rules governing intellectual property for vaccines and other essential medical products. Read More: U.S. Trade Chief Meets Pfizer, AstraZeneca About Vaccine Supply As of this week there are fresh signals that the Biden administration, which currently opposes a waiver to the WTO agreement on Trade-Related Aspects of Intellectual Property Rights, wants vaccine manufacturers like Pfizer Inc. and AstraZeneca Plc to help ramp up U.S. pandemic assistance to the rest of the world. “There is movement,” Okonjo-Iweala said. “Are we there yet? No, but there is a little bit of change in the air among members. I think hopefully we will be able to come to some sort of a framework for the WTO ministers to bless.” “We don’t have time,” she added. “People are dying.” Okonjo-Iweala said this month’s vaccine meeting also revealed areas where the developing world can increase its capacity to produce more doses rather than waiting for rich countries to send them their excess supplies. She said various emerging markets such as India, Pakistan, Bangladesh, Senegal, Indonesia and Egypt already have some capacity to begin producing vaccines for people living in developing economies.

#### Scenario 3 – Vaccine Diplomacy

#### US primacy is on the brink now – China is tipping the scale via outbreak control and equipment rollout.

Tellis 20 (Ashley Tellis, Ashley J. Tellis is the Tata Chair for Strategic Affairs and a senior fellow at the Carnegie Endowment for International Peace. He is also a counselor at the National Bureau of Asian Research and the research director of the Strategic Asia Program., 5-4-2020, Nbr, "Covid-19 Knocks on American Hegemony | The National Bureau of Asian Research (NBR)", https://www.nbr.org/publication/covid-19-knocks-on-american-hegemony/)

Ashley J. Tellis examines the threat that the Covid-19 pandemic poses to the U.S.-led international order and discusses what the United States must do to preserve American hegemony over the long term. This is the second essay in the series “The New Normal in Asia,” which explores ways in which the Covid-19 pandemic might adjust, shape, or reorder the world across multiple dimensions. After almost two decades of conflicted hesitancy**, the U**nited **S**tates finally **acknowledged** that **it is involved in** a long-term strategic **competition with China.** This rivalry, almost by definition, is not merely a wrangle between two major states. Rather, **it involves a struggle for dominance** in the international system, even if China as the rising power disavows any such ambition. China’s very ascendancy—if sustained—could over time threaten the U.S. hegemony that has been in place since the end of World War II. It is this reality of unequal growth—which has nourished China’s expanding influence and military capabilities—that lies at the root of the evolving rivalry. Although the term sometimes has unsettling connotations, the United States is a genuine hegemon, understood in the original Greek sense as a leader in the competitive international system. This hegemony derives from the fact that the United States is the world’s single most powerful state. First, it remains the largest economy in real terms, a foundation that underwrites its capacity to project military power globally in ways unmatched by any peers. Second, it possesses a sufficiently effective state that presides over a remarkably productive society. And, third, in partnership with strong allies in North America, Western Europe, East Asia, and Oceania, who share both values and interests, the United States has created an international order that buttresses its primacy materially, institutionally, and ideationally, thereby allowing it to advance diverse interests while economizing on its use of force. Although these foundations have been stressed in recent times, the **Covid-19 pandemic now threatens them in deadly ways**. While it is still too early to tell what the pandemic’s long-term economic impact on the United States will be, the **early consequences are alarming**. The **slowing economic activity** that began in March this year is expected to **accelerate** deeply into the next quarter**, leading to a contraction of the U.S. economy (and that of its European partners) at double-digit rates.** The 12% decline expected in the second quarter is equivalent to an annualized 40% decline rate in GDP growth, something never witnessed even at the height of the global financial crisis in 2008 (and that could exceed the worst since the end of World War II). As a result, the U.S. economy is expected to witness an unemployment rate of some 15% in the second and third quarters of 2020, with double-digit unemployment persisting well into 2021 according to the Congressional Budget Office. This economic shock is part of the larger contraction in global GDP, which is also expected to witness negative growth in 2020. The massive dislocations that are now occurring on a global scale have made the state the principal engine of mitigation and recovery, in effect returning it to the center stage even in what are otherwise free-market economies. This has already occurred in the United States. To alleviate the consequences of the rapid recession, the U.S. Congress has appropriated over $2 trillion thus far, more than doubling the package passed during the 2008 financial crisis, with even more to come. And the Federal Reserve has launched a new round of quantitative easing involving $700 billion worth of asset purchases, while dropping its benchmark interest rate to zero and reducing the discount rates and lengthening the loan terms for banks in an effort to keep aggregate credit flowing and illiquid firms solvent. The Congressional Budget Office has assessed that the legislative actions are expected to expand the U.S. federal budget deficit to $3.7 trillion, and total U.S. debt by almost 10%, with the debt held by the U.S. public reaching 101% of GDP by the year’s end. While such massive governmental intervention is inevitable and necessary, whether it will suffice for recovery is still uncertain. Much will depend on when the lockdowns can be relaxed, and that in turn depends on the progress made in containing the virus. The dilemmas involved in juggling the threats of pandemic resurgence, on the one hand, and the perils of continued contraction of the real economy, on the other hand, cannot be underestimated. What is certain, however, is that the **U.S. economy will face significant transitions in the aftermath of this pandemic** in at least two directions that bear on the future of its national power. First, it is likely that the **unrestrained globalization** that evolved over the last several decades—driven largely by the profit-maximizing behaviors of private entities—**will be replaced by** a **more constrictive** version of **interdependence** in which states seek to protect critical aspects of the production chain within national boundaries as an insurance against future vulnerability. These efforts necessarily entail increased systemic inefficiency and could reduce overall growth rates, but it appears that governments are now more willing to accept such costs if they promise greater security and control. Where the United States is concerned, the drive to constrict globalization, which had already been initiated by the Trump administration prior to the pandemic, is likely to gather greater steam. The prospect of China retaining monopolistic dominance in global manufacturing is proving unacceptable to Washington when intensified competition with Beijing looms large. Consequently, **even if global production chains do not retreat to within national boundaries**—as is likely—the shift toward greater integration within regions populated by friendly states will gain momentum. **China’s** own irresponsible **behavior** in **concealing the** scope of the **pandemic**’s outbreak and its distribution of shoddy test kits and personal protective equipment internationally **are only likely to reinforce the desire for greater national autonomy over critical manufacturing capabilities whose definition now promises to transcend all narrow conceptions of national defense**. Second, short of an armed attack on the United States, the competition for public resources between nondefense and defense goods is likely to intensify. Already before the pandemic, political pressures within the country from both the right and the left were pushing in the direction of greater attention to needs at home, with the Trump administration’s combative efforts at increasing burden sharing by the allies only a manifestation of this challenge. Even if the more optimistic analysis from J.P. Morgan, for example, comes to pass—that the United States could begin to bounce back from the pandemic in the second half of the year—the cumulative economic losses that the country suffers would total roughly $11 trillion over a decade. More pessimistic assessments offered under some scenarios by McKinsey, in contrast, suggest that such losses would reach almost $19 trillion over the same time period. Under such conditions, it is unlikely that U.S. defense expenditures at the 2019 level of $676 billion could be sustained over the next decade. If the experience of the global financial crisis is any indication, U.S. defense expenditures, which were reduced by some $500 billion over a decade under the Budget Control Act of 2011, will likely face an even deeper cuts given the much larger current stimulus packages that will have to be serviced over time. As it is, U.S. defense expenditures were already slated to fall as a percentage of GDP over the next ten years. Consequently, the Pentagon should consider itself lucky if, as one insightful RAND analysis concluded, the impact of Covid-19 on its budget was merely equivalent to a second sequestration. It will likely be far worse**. At a time when the U**nited **S**tates **is struggling to reorient its military capabilities to deal with new rising challengers such as China—threats that the nation ignored for over two decades because of its involvement in wars in the greater Middle East**—this likely compression of its defense budgets cannot be good news. If Washington cannot complete the transformations necessary to successfully project power into the Asian rimland in the face of Beijing’s significant and growing denial capabilities, **the threat to American primacy will be serious** indeed. The coming pressures on the defense budget, however, are only part of a larger problem facing the United States as it seeks to buttress the economic foundations of its primacy. The recent **rise of populism** in both political parties **has highlighted the acute income inequalities** in the United States, **which are now the highest** among G-7 countries. A broad segment of the American population has not benefited from the otherwise successful globalization that permitted the country to enjoy higher levels of aggregate growth. The rising domestic demand for shifting resources from maintaining hegemonic order globally to remedying the economic losses suffered by the 80% of households who collectively earn just 48% of the country’s income (according to the Pew Research Center) will only intensify because of the pandemic’s consequences. Although an increase in the size of the American welfare state and a transformation of its character as means of dealing with this problem are long overdue, these alterations unfortunately will have to occur against the backdrop of what Lawrence Summers and others have highlighted as the renewed threat of “secular stagnation.” As scholars of international competition have long understood, **successful hegemonies arise—and can be successfully maintained—only by states that dominate the cycles of innovation to create new leading sectors in the economy**. These transformations produce supernormal returns, which are then utilized for satisfying internal needs and expanding external influence. By the best accounts, the United States has exemplified this pattern since around 1945. But if the country is in fact now trapped in a period of low productivity growth and persistent weaknesses in aggregate demand—each for different reasons—the net result may be a diminished capacity to sustain both the increasing domestic obligations and its extant international interests simultaneously. Or, in other words, **the task of preserving U.S. primacy over the next few decades will prove to be harder than before. This constraint will only be amplified if the disconcerting findings of a working paper from the Federal Reserve Bank of San Francisco prove to be true of the Covid-19 pandemic**: that the deleterious macroeconomic consequences of pandemics appear to persist for around 40 years. While a contraction of the U.S. economy as a result of the pandemic is to be expected, the effects have been exacerbated by the mismanagement of the American response. By the traditional standards of assessing state-society relations, the United States is usually considered, in Sven Steinmo’s summary description, as a “strong nation–weak state.” Its founders deliberately created a constitutional system that prevented overbearing political authority from extinguishing the liberties of its peoples. Yet over time the power of the American state grew to a point where it was effective enough to enjoy the best of both worlds: it was sufficiently capable of extracting the resources necessary to produce the public goods required within the country while deploying the military instruments necessary for external influence without at the same time stifling the freedom, creativity, and productivity of its population. Maintaining this fine balance was what made the United States exceptional. And, for most of the postwar era, the American state was in fact the object of global admiration precisely because it could advance these objectives simultaneously in ways that most of its other competitors could not. At the heart of this achievement lay effective governmental institutions and capable state managers, both of which were characterized by high degrees of substantive and instrumental rationality. It has now become clear that the **Trump administration’s failure to anticipate the arrival of the Covid-19 pandemic in the United States had little to do with strategic surprise.** The intelligence community began warning of the threat in early January, officials in the Department of Health and Human Services began contingency planning in mid-January, and the senior staff on the National Security Council started sounding the alarm later that month, only to be stymied by the president’s lack of attention at exactly the time when the state as an institution has once again become central to managing the nation’s response to the crisis. The erosion of the deliberative process within the White House and the subversion of the decision-making system by the president’s idiosyncrasies thus have left the United States—the world’s richest and most powerful nation—with the odious distinction of leading the global death toll with, at the time of writing, over 67,000 fatalities and rising (over twice the number of fatalities suffered by the next country). When the prospect that the pandemic would break out of China appeared real, substantive rationality demanded that the federal government focus resolutely on preventing the virus from reaching American shores. But given the challenges arising from dense international travel, it was critical to do whatever was necessary to prevent its spread within the country. Thanks to past experience with pandemics around the world, public health authorities knew full well what instrumental rationality required: instituting immediate quarantines and lockdowns to buy time while mobilizing national capabilities for detecting infections, distributing protective gear, and searching for antidotes. The two months squandered by the president in denying the import of the pandemic resulted in a failure to mobilize the federal government in effective ways to accomplish these objectives, leaving the country trying to cope with the crisis largely at the state level. The net result has been patchwork effectiveness rather than a synchronized solution. In fairness to the Trump administration, many of the resources (such as masks) that would have helped mitigate the pandemic were not replenished in the Strategic National Stockpile after George W. Bush’s years in office in part because congressional Republicans rejected the funding proposed by the Obama administration. The United States as a country is also not well organized to deal with large-scale disasters, given the priority placed on local and state governments as first responders. The failures in the federal regulatory system pertaining to the production of test kits and drugs, the lack of regional contingency planning, the absence of a permanent budget for the national stockpile, and the stark inequalities in access to medical care all remain serious structural constraints. And the market logic that governs the U.S. medical supply chain has not helped either: it resulted in hospitals reducing their inventory of critical supplies and manufacturers reducing their output of personal protective gear because of pressures on the bottom line, with neither sector anticipating that a global shutdown would retard their ability to speedily ramp up in a crisis. But the failures of presidential leadership only exacerbated these problems. The painful absence of systemic rationality in regard to both the assessment of the pandemic and the decision-making process pertaining to it within the executive branch have been exemplified by the absence of competent officials in several positions; the muddied and often conflicting lines of authority regarding pandemic management; the frequent subversion of professional epidemiological expertise; the politicized decisions regarding the removal of senior officials; and the almost caricatural presidential statements on medical issues. These shortcomings did not help either to correct the bureaucratic mishaps that occurred in the nation’s health protection agencies such as the Centers for Disease Control and Prevention, the Food and Drug Administration, and the Department of Health and Human Services or to convey the resolution that was required to restore public trust and navigate the perfect storm caused by the nation’s larger unpreparedness. While the damage caused to the U.S. economy and the human losses will make the task of preserving U.S. hegemony after the pandemic harder—at a time when most assessments suggest that countries like China are likely to recover faster than the United States—the reputational damage to Washington is just as serious.

#### Current Chinese vaccine drive increases global leadership – easy access, quantity, and single dosage.

**Huang 21**, Yanzhong. "Vaccine Diplomacy Is Paying Off For China." Foreign Affairs. March 11, 2021. Web. August 17, 2021. <https://www.foreignaffairs.com/articles/china/2021-03- 11/vaccine-diplomacy-paying-china>. //JQ

China’s vaccine drive appears in many ways to be paying off. China has completed Phase 3 clinical trials for at least two vaccines with positive results. Unlike some of their Western counterparts, all of China’s vaccines can be stored at normal refrigerator temperatures, a factor that makes them particularly appealing to the developing world, where refrigeration is often not available. One Chinese vaccine, developed by the company CanSino Biologics, shows the same efficacy as Johnson & Johnson’s (66 percent) and also requires only a single dose. For these reasons among others, elites in the developing world are embracing Chinese-made vaccines. The leaders of many countries—including Chile, Cambodia, Peru, Serbia, the United Arab Emirates (UAE), Indonesia, Turkey, Zimbabwe, and Seychelles—have either welcomed Chinese vaccine deliveries personally or publicly received the first shot of a Chinese-made vaccine. In mid-February, Peruvian Foreign Minister Elizabeth Astete resigned after being accused of jumping the line to receive a shot from Sinopharm. By early February, three Chinese vaccine makers (Sinopharm, Sinovac, and CanSino) had received overseas orders for more than 572 million doses, accounting for nearly eight percent of all doses under contract globally. In Indonesia, Sinovac alone will supply 38 percent of the nearly 330 million doses that Jakarta has secured, in a deal that will bring the company a profit of some $1 billion. As of mid-February 2021, China—a latecomer in internationally marketing its vaccines—had shipped more than 46 million doses or their active ingredients overseas. Whether or not Beijing likes the term, vaccine diplomacy is reaping soft-power dividends for the Chinese government and consolidating its relationship with BRI countries. Algerian Foreign Minister Sabri Boukadoum, for example, recently said that his country was grateful for China’s vaccine assistance and expressed his willingness to promote China’s BRI. And the Chinese public takes pride in Beijing’s vaccines, viewing their uptake as a clear sign of China’s global leadership. A widely circulated social media post claims that “Chinese vaccines are taking over the whole world.” A well-known Chinese scholar proudly wrote of China’s becoming “the arsenal of the world’s pandemic response.” Even French President Emmanuel Macron admitted in early February that China’s vaccine diplomacy is “a little bit humiliating” for Western leaders and countries, as the Western, multilateral approach to vaccine distribution has proven less efficient.

#### China’s massive vaccine exports provide huge diplomatic advantage in strategic areas.

**Marlow 21**, Iain. "China Is Winning The Race To Vaccinate The World, For Now." Bloomberg Businessweek. May 19, 2021. Web. August 17, 2021. <https://www.bloomberg.com/news/articles/2021-05-19/china-s-covid-shots-give- beijing-soft-power-lever-around-the-world>. //JQ

The Covid-19 pandemic has been a devastating public-health catastrophe the world over. For China, it’s also provided an unprecedented geopolitical opportunity. After it got the outbreak under control, and with world leaders distracted by their own countries’ health struggles, it was able to use the chaos of the pandemic to step up political crackdowns in Hong Kong and Xinjiang. Other nations cried foul, but China persisted. Perhaps most important, early exports of its rapidly developed vaccines have provided Beijing with a potent diplomatic calling card in Africa, Asia, Latin America, and the Middle East. And as the global death toll mounts, Chinese officials get to brag about their virus-fighting success around the world even as they gain greater access and influence in far-flung capitals. “The U.S. response to the epidemic is nothing short of a mess and total failure,” Chinese Foreign Ministry spokesman Zhao Lijian, one of the original wolf warrior diplomats, named for their confrontational stance, said last month. “In contrast, China secured major strategic outcomes in fighting the virus.” About China, at least, he’s not wrong. So far the country has shipped about 265 million Covid vaccine doses, more than all other nations combined, with commitments to provide an impressive 440 million more, according to Airfinity Ltd., a science information and analytics company. Other leading powers haven’t kept up. President Joe Biden has vowed the U.S. will become an “arsenal for fighting Covid-19.” His administration promises to boost production of U.S. vaccines and donate 80 million doses overseas by the end of June, including 20 million authorized for U.S. use—the first time he’s shared doses he could have given to Americans. Europe has done better, exporting about 118 million domestically produced doses so far, according to Airfinity, even amid criticism for a slow start to its vaccination drive at home. India, meanwhile, had exported almost 69 million doses to nearly 100 countries until it suffered the world’s worst outbreak and halted further deliveries. China is about to get another big boost. After clearing Western-made shots, the World Health Organization recently authorized the vaccine made by China’s Sinopharm Group Co. A nod for one from Sinovac Biotech Ltd. is expected soon. This will allow Chinese shots to flow to dozens of developing nations through Covax, the global vaccine initiative, which has managed to ship only 68 million of the 2 billion doses it hopes to send out by yearend. “China is going to be a critically important partner in the long run,” says Richard Hatchett, chief executive officer of the Coalition for Epidemic Preparedness Innovations, one of the groups leading Covax. The WHO authorization, a de facto approval for regulators in poorer countries, could help unleash hundreds of millions of doses of Chinese shots. The impact of the country’s contributions will also be magnified by the absence of India, making this “the best time for China to practice vaccine diplomacy and to make more use of its first-mover advantage,” says Yanzhong Huang, a senior fellow for global health at the Council on Foreign Relations.

#### China rise causes nuclear war.

Bradley A. Thayer & Lianchao Han 19. \* Professor of Political Science at the University of Texas San Antonio. \*\*vice president of Citizen Power Initiatives for China and a visiting fellow at the Hudson Institute. Founder of the Independent Federation of Chinese Students and Scholars. "The ‘Xi Doctrine’: Proclaiming and Rationalizing China’s Aggression". National Interest. 6-12-2019. <https://nationalinterest.org/feature/%E2%80%98xi-doctrine%E2%80%99-proclaiming-and-rationalizing-china%E2%80%99s-aggression-62402>

Using the occasion of the Shangri-La Dialogue in Singapore this month, Chinese Minister of National Defense and State Councilor Gen. Wei Fenghe, delivered a sharp message to the United States, which may be termed the “Xi Doctrine” on China’s use of force, after Chinese premier Xi Jinping. Wei declaring both China’s resolve to aggress to advance its interests and a rationalization for the use of force. Wei’s de facto threat of war should not be lost in his nuances, deliberate ambiguity, or in translation. His remarks were so bellicose that the world has noticed, as was certainly intended by the leadership of the Chinese Communist Party (CCP). Empirical evidence of China’s aggression is increasingly common, from its attempt to dominate the South China Sea, the neo-imperialist effort to gain control of states through the Belt and Road Initiative, to its technological imperialism to control 5G and artificial intelligence technologies. What is rather less frequent are statements from high-level Chinese officials proclaiming the country’s intent to be aggressive and offering an attempted legitimizing principle justifying that aggression. While much of the content of Wei’s remarks were in keeping with the gossamer pronouncements on China’s peaceful intentions, as well as a paean to Xi Jinping’s leadership, they still conveyed that China is ready and willing to resort to war if the United States stands in its way of global expansion; and they made clear that China must go to war, or even a nuclear war, to occupy Taiwan. Specifically, there are four elements that comprise the Xi Doctrine and are indications of China’s signaling its willingness to use force. The first component is a new and alarming proclamation of the undisguised threats to use force or wage an unlimited war. China is becoming bolder as its military power grows. This is evidenced in Wei’s muscular remarks on the People’s Republic of China’s approach against Taiwan, his explicit statement that China does not renounce the use of force against Taiwan, and his effort to deter the United States and its allies from intervention should an attack occur. Wei forcefully stated: “If anyone dares to separate Taiwan from China, the Chinese military has no choice but must go to war, and must fight for the reunification of the motherland at all costs.” “At all cost” means that China will not hesitate to use nuclear weapons or launching another Pearl Harbor to take over Taiwan. This is a clear warning of an invasion. Second, the Xi Doctrine legitimizes territorial expansion. Through his remarks, Wei sought to convince the rest of the world that China’s seizure of most of the South China Sea is an accomplished fact that cannot be overturned. He made bogus accusations, which included blaming the United States for “raking in profits by stirring up troubles” in the region. He insisted that only ASEAN and China must resolve the issue. He claimed that China’s militarization on South China Sea islands and reefs were an act of self-defense. Should this be allowed to stand, then the Xi Doctrine will set a perilous precedent of successful territorial expansion, which will further entice China and jeopardize the peace of the region. Third, the doctrine targets the United States as a cause of the world’s major problems and envisions a powerful China evicting the United States from the region. Wei obliquely identified the United States as the cause wars, conflicts, and unrest, and sought to convey that the United States will abandon the states of the South China Sea (SCS) when it is confronted by Chinese power, a typical divide and conquer strategy used by the CCP regime. The Xi Doctrine’s fourth element is the mendacity regarding China’s historical use of force and current actions. While the distortions of history were numerous, there were three major lies that should be alarming for the states of the region and the global community. First, Wei said that China had never invaded another country, which is a claim so transparently false it can only be a measure of the contempt he held for the audience. China has a long history of aggression, including against the Tibetans and Vietnamese, and perhaps soon against the Taiwanese. Second, Wei argued that hegemony does not conform to China’s values when, in fact, China proudly was Asia’s hegemon for most of the last two thousand years. Lastly, he claimed that the situation in the SCS is moving toward stability—from China’s perspective this stability is caused by its successful seizure of territory. In fact, the SCS is far less stable as a result of China’s actions. Efforts to counter this grab are denounced by Wei as destabilizing, which is a bit like a thief accusing you of a crime for wanting your property returned. Wei’s belligerent rhetoric is an indication that the CCP regime faces deep external and internal crises. Externally, the Trump administration has shocked the CCP with the three major steps it has taken. First, it has shifted the focus of the U.S. national-security strategy and now identifies China explicitly as its primary rival—abandoning the far more muted policies of previous administrations. Second, Trump has acted on this peer competitive threat by advancing tangible measures, such as arms sales to allies and the ban of Huawei. Third, the administration has made credible commitments to assure partners and allies to counter China’s aggression and bullying. These have unbalanced the CCP regime, and its natural reaction is to bully its way out. Additionally, the CCP regime has perceived that the world today has begun to consider the negative implications of China’s rise, and the United States is determined to prevent what heretofore had been considered China’s unstoppable rise. From the perspective of CCP, conflict is increasingly seen as inevitable and perhaps even imminent. Wei’s bellicosity should be seen in this light, and the PLA is tasked with fighting and winning the war. Internally, Xi’s anti-corruption campaign that selectively targets his political rivalries, and his abandoning the established rules such as term limited of presidency, have introduced deep cleavages into the unity of the regime unity. China’s economic slowdown, made worse by the U.S. trade war, is a fundamental challenge to the regime’s legitimacy. Xi’s repression and suppression of the Chinese people, particularly human-rights defenders, Christians, Kazakhs, Uighurs, and other minorities, have miscarried. Drawing from the pages of unfortunate history, in a classic social-imperialist move, the regime wants to direct these internal tensions outward. At the same time, the nationalistic fervor advanced by the CCP’s propaganda and by the rapid military modernization have made many young militant officers in the PLA overconfident. This is infrequently noticed in the West. They can hardly wait to fight an ultimate war to defeat the arch-enemy. This plainly dangerous mentality echoes the Japanese military’s beliefs before Pearl Harbor. The bellicosity evinced in Wei’s speech is serious and is not bluster intended to deter. The United States cannot meet China’s threat with half-measures, which are likely to further encourage China’s aggressive behavior. The United States must respond to China’s belligerence with greater strength, adamantine determination, and more vigorous diplomatic and military measures. With the Xi Doctrine, China has proclaimed and rationalized its aggression. A Trump Doctrine forged in response has to reveal to all global audiences, most importantly the CCP leadership, the recklessness of the Xi Doctrine and the supreme folly of aggression.

#### Unipolarity is key to check back a litany of issues - Even if primacy isn’t perfect, hegemonic transitions spur regional wars and conflict.

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

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

#### US waiver action is key to lock in global standing and overtake China’s vaccine diplomacy.

**Macias 5/6,** Amanda. “U.S. Backs Waiving Patent Protections for Covid Vaccines, Citing Global Health Crisis.” CNBC, CNBC, 6 May 2021, www.cnbc.com/2021/05/05/us-backs-covid-vaccine-intellectual-property-waivers-to-expand-access-to-shots-worldwide.html.

WASHINGTON — The Biden administration announced Wednesday that it supports waiving intellectual property protections for Covid-19 vaccines, as countries struggle to manufacture the life-saving doses. “This is a global health crisis, and the extraordinary circumstances of the COVID-19 pandemic call for extraordinary measures. The Administration believes strongly in intellectual property protections, but in service of ending this pandemic, supports the waiver of those protections for COVID-19 vaccines,” United States Trade Representative Katherine Tai wrote in a statement. “As our vaccine supply for the American people is secured, the Administration will continue to ramp up its efforts — working with the private sector and all possible partners — to expand vaccine manufacturing and distribution. It will also work to increase the raw materials needed to produce those vaccines,” the statement added. The World Health Organization’s director-general, Tedros Adhanom Ghebreyesus, praised the U.S. decision as a “monumental moment in the fight against Covid-19” that reflects the “moral leadership” of the White House in the fight to end the pandemic. Stocks of major pharmaceutical companies that have produced vaccines, including [Moderna](https://www.cnbc.com/quotes/MRNA), BioNTech and [Pfizer](https://www.cnbc.com/quotes/PFE), dropped sharply after news of the potential waivers first broke. Pfizer ended its trading day flat, while Moderna lost 6.1%; [Johnson & Johnson](https://www.cnbc.com/quotes/JNJ) shed a modest 0.4%. The Pharmaceutical Research and Manufacturers of America expressed pointed opposition to the Biden administration’s support for waiving IP protections. The trade group’s members include vaccine makers such as AstraZeneca, Pfizer and Johnson & Johnson. “In the midst of a deadly pandemic, the Biden Administration has taken an unprecedented step that will undermine our global response to the pandemic and compromise safety,” said Stephen J. Ubi, the group’s president and CEO. “This decision will sow confusion between public and private partners, further weaken already strained supply chains and foster the proliferation of counterfeit vaccines. ” World Trade Organization leaders reportedly urged member nations this week to quickly hash out the details of an agreement to [temporarily ease the rules protecting intellectual property](https://www.cnbctv18.com/world/wto-mulling-intellectual-property-waivers-for-vaccines-9199661.htm) behind coronavirus vaccines. The waiver, proposed by South Africa and India, could remove obstacles to ramping up the production of vaccines in developing countries. An administration official with knowledge of Tai’s decision cautioned that the WTO’s discussions over waivers could take time and, since the body’s rulings are based on consensus, will require approval from all 164 members. The official, who spoke on the condition of anonymity, added that Tai held at least two dozen meetings and calls with various industry stakeholders, including the major vaccine manufacturers. The person added that Tai plans to advocate for friendly cooperation between global firms to ease supply-chain bottlenecks. President Joe Biden at the White House on Wednesday affirmed that the White House would back the World Trade Organization’s IP waiver proposal. “Yes, I’m going to talk about that later today. Yes,” Biden said shortly before Tai’s statement was released. The Biden administration’s move comes as coronavirus infections surge to their highest levels in countries that have struggled to procure or distribute vaccines, [highlighting a contrast with other nations](https://www.cnbc.com/2021/04/22/covid-rich-countries-are-refusing-to-waive-ip-rights-on-vaccines.html), including the U.S., Canada and the U.K. In recent weeks, India has grappled with a staggering rise in new coronavirus infections. Over the weekend, India reported 400,000 daily cases, bringing the nation’s cumulative total to 20,665,148 cases, [according to figures compiled by Johns Hopkins University](https://coronavirus.jhu.edu/map.html). The spike may have been triggered by a highly contagious Covid variant, known as B.1.617, which was first identified in India. “The Biden Administration understands that a pandemic doesn’t respect boundaries and that what’s happening in India has global public health implications,” wrote Dewardic McNeal, an Obama-era policy analyst at the Defense Department. “If it spread to Africa or Latin America to the levels ravaging India that many countries on those continents would collapse,” he added. “So this move is just good global public health policy.” The variant has since been identified in other countries, including the United States. In April, Indian Prime Minister Narendra Modi discussed lifting the patent protections of coronavirus vaccines with Biden, [according to a readout of their call](https://pib.gov.in/PressReleseDetail.aspx?PRID=1714238). The relaxation would grant governments quicker and more affordable access to the lifesaving doses. Last week, the Biden administration announced that it will immediately [make raw materials needed for India’s coronavirus vaccine production available](https://www.cnbc.com/2021/04/25/us-to-give-india-raw-materials-for-vaccines-medical-supplies-to-fight-covid.html). Critics have argued that patents on vaccines and other protections are not the central obstacle to producing more vaccines for the nations that need them most. Some also suggest such agreements could harm companies’ incentives to innovate during future pandemics. “This is a huge misstep by the Biden Administration that will do nothing to increase vaccine distribution and will endorse China’s ability to piggyback on U.S. innovation to further its vaccine diplomacy aims,” Clete Willems, a former attorney at the Office of the U.S. Trade Representative, said of the decision. “A solution more in line with the Administration’s stated objectives of improving U.S. competitiveness and keeping jobs in America would be to produce and export vaccines from the United States,” said Willems, who worked under both the Obama and Trump administrations. A [Washington Post editorial this week](https://www.washingtonpost.com/opinions/global-opinions/how-to-help-the-poorest-countries-get-vaccinated/2021/05/03/18d5b79a-ac3a-11eb-acd3-24b44a57093a_story.html) said the goal of creating a “people’s vaccine” to defeat Covid is “more slogan than solution.” McNeal acknowledged the concerns voiced by Willems, but noted that Tai’s decision to make its vaccines broadly available may offer the Biden administration a backdoor way to improve American geopolitical standing abroad. “There is no question that vaccine diplomacy has become a major part of the geopolitical competition between the U.S. and China, and to some extent Russia and its Sputnik vaccine,” McNeal wrote. “This move it will severely undercut the Chinese efforts to spread its vaccine (and influence) globally.” “If the U.S. doesn’t move on something like this with India in particular, it begs the question for many U.S. allies and partners ‘what’s in it for us?’ to move closer to the U.S. versus China if we can’t even get assistance in our time of need,” he added.

#### The plan is key to catching up to China and changing public perception on its waiver stance.

**Shumei 5/6**, Leng. “US Support for VACCINE Patent Waiver 'Political Tactic,' Won't Benefit Countries Lacking Production Capacity.” Global Times, 6 May 2021, www.globaltimes.cn/page/202105/1222834.shtml.

After the Biden administration announced support on Wednesday for waiving intellectual property rights for COVID-19 vaccines, a sharp reversal from sitting on stockpiles indifferent to other countries' demands, Chinese experts pointed out the attitude change was more a case of crisis management to restore the country's international reputation, and there is little chance that it will be more than "lip service." In response to the US announcement, Chinese Foreign Ministry spokesperson Wang Wenbin said on Thursday that for the accessibility of vaccines, China hopes that under the World Trade Organization (WTO) framework, constructive communications and effective results can be achieved. China supports efforts to improve vaccine accessibility and is willing to make contributions to promoting accessibility and affordability in developing countries. The US is one of the wealthy countries and regions - others include the UK and the EU - that previously blocked negotiations at the WTO about a proposal led by India and South Africa to waive protection for some patents and technology, and boost vaccine production in developing countries. Ten meetings in seven months failed to produce a breakthrough on the proposal, as any easing in the WTO's Trade-Related Aspects of Intellectual Property requires all 164 members' agreement, which remains difficult despite the US' support, as other rich countries not necessarily would follow, observers said. The US' reversal came amid a large-scale outbreak in India and floods of criticism of the US for its indifference to its Indian partner's sufferings. World Health Organization head Tedros Adhanom Ghebreyesus called the US' move "a monumental moment in the fight against COVID-19" and "a powerful example of US leadership to address global health challenges." Western media said the Biden administration was bowing to mounting pressure from Democratic lawmakers and more than 100 other countries by making the reversal, which angered pharmaceutical companies. Shares in Moderna Inc and Novavax Inc dropped several percent in regular trade following the Wednesday announcement, although Pfizer Inc stock fell only slightly, according to Reuters. Besides different reactions to the US government stance, the waiver is more like a political tactic that the US is using to restore its ruined reputation, given its previous indifference and negative actions as a major vaccine supplier while many poor countries are in severe need of shots, Feng Duojia, president of the China Vaccine Industry Association, told the Global Times on Thursday. "The highest priority of the US is to win back public trust, this is the only explanation that I can think of for the US' reversal on the IP waiver," Feng said. Observers noted the US government can hardly push forward the administrative and legal process of the waiver it proposed. "The key to vaccine supply is not the patents or technology itself, but manufacturing techniques and the personnel that poor countries lack. So it is difficult for poor countries to actually benefit from the waiver," a Beijing-based vaccine expert told the Global Times on Thursday on condition of anonymity. The manufacturing techniques of mRNA vaccines are very advanced, especially the techniques to deliver nano-lipsomes and modify nucleic acid, which are difficult even for major vaccine manufacturing countries like China and India at the current stage, the Beijing expert said. A more plausible model would be directly selling and donating vaccines or helping local manufacturing of the products, experts said. China has contributed more than 30 percent of global vaccine supply and the ratio continues to increase, according to Feng. Data compiled by Airfinity, a London-based science intelligence platform dedicated to COVID-19, shows that out of the 164 million COVID-19 vaccines the US manufactured up to March, none were exported while the EU exported 42 percent of the 110 million doses it produced by the same month. China has also been transferring techniques to developing countries, including Argentina, Mexico and Pakistan, and helping them build production lines to enhance local vaccine accessibility, Chinese vaccine producers said. "Piles of shots are approaching expiration dates in warehouses in the US. Selling these shots to poor countries would do hundred times more good than waiving patents. What could patents bring about to countries that even do not have a production line?" a Chinese netizen commented on China's Twitter-like Sina Weibo.