### **1ar**

### **T**

#### **Counter-interp: affs can specify states**

#### **Err aff—they most likely misinterpreted bare plurals**

**Reiter and Frank ’10** (Nils Reiter and Anette Frank Department of Computational Linguistics Heidelberg University, Germany, July 2010. “Identifying Generic Noun Phrases” <https://pdfs.semanticscholar.org/5078/2fb22573c8b612743aade2d3e0b241f8ae0f.pdf>)

The above classification of generic expressions is well established in traditional formal semantics (cf. Krifka et al. (1995))2. As we argue in this paper, these distinctions are relevant for semantic processing in computational linguistics, especially for information extraction and ontology learning and population tasks. With appropriate semantic analysis of generic statements, we can not only formally capture and exploit generic knowledge, but also distinguish between information pertaining to individuals vs. classes. We will argue that the automatic identification of generic expressions should be cast as a machine learning problem instead of a rule-based approach, as **there is (i) no transparent marking of genericity in English (as in most other European languages) and (ii) the phenomenon is highly context dependent.** In this paper, we build on insights from formal semantics to establish a corpus-based machine learning approach for the automatic classification of generic expressions. In principle our approach is applicable to the detection of both generic NPs and generic sentences, and in fact it would be highly desirable and possibly advantageous to cover both types of genericity simultaneously. Our current work is confined to generic NPs, as there are no corpora available at present that contain annotations for genericity at the sentence level. The paper is organised as follows. Section 2 introduces generic expressions and motivates their relevance for knowledge acquisition and semantic processing tasks in computational linguistics. Section 3 reviews prior and related work. In section 4 we motivate the choice of feature sets for the automatic identification of generic NPs in context. Sections 5 and 6 present our experiments and results obtained for this task on the ACE-2 data set. Section 7 concludes. 2 Generic Expressions & their Relevance for Computational Linguistics 2.1 Interpretation of generic expressions Generic NPs There are two contrasting views on how to formally interpret generic NPs. According to the first one, a generic NP involves a special form of quantification. Quine (1960), for example, proposes a universally quantified reading for generic NPs. This view is confronted with the most important problem of all quantificationbased approaches, namely that the exact determination of the quantifier restriction (QR) is highly dependent on the context, as illustrated in (3)3. (3) a. Lions are mammals. QR: all lions b. Mammals give birth to live young. QR: less than half of all mammals 3Some of these examples are taken from Carlson (1977). c. Rats are bothersome to people. QR: few rats4 In view of this difficulty, several approaches restrict the quantification to only “relevant” (Declerck, 1991) or “normal” (Dahl, 1975) individuals. According to the second view, generic noun phrases denote kinds. Following Carlson (1977), a kind can be considered as an individual that has properties on its own. On this view, the generic NP cannot be analysed as a quantifier over individuals pertaining to the kind. For some predicates, this is clearly marked. (1.a), for instance, attributes a property to the kind lion that cannot be attributed to individual lions. Generic sentences are usually analysed using a special dyadic operator, as first proposed by Heim (1982). The dyadic operator relates two semantic constituents, the restrictor and the matrix: Q[x1, ..., xi]([x1, ..., xi] | {z } Restrictor ; 9y1, ..., yi[x1, .., xi, y1, ..., yi] | {z } Matrix ) By choosing GEN as a generic dyadic operator, it is possible to represent the two readings (a) and (b) of the characterising sentence (4) by variation in the specification of restrictor and matrix (Krifka et al., 1995). (4) Typhoons arise in this part of the pacific. (a) Typhoons in general have a common origin in this part of the pacific. (b) There arise typhoons in this part of the pacific. (a’) GEN[x; y](Typhoon(x);this-part-of-thepacific( y)^arise-in(x, y)) (b’) GEN[x; y](this-part-of-thepacific( x);Typhoon(y)^arise-in(y, x)) In order to cope with characterising sentences as in (2.a), we must allow the generic operator to quantify over situations or events, in this case, “normal” situations which were such that Erd˝os took amphetamines. 2.2 Relevance for computational linguistics Knowledge acquisition The automatic acquisition of formal knowledge for computational applications is a major endeavour in current research 4Most rats are not even noticed by people. 41 and could lead to big improvements of semanticsbased processing. Bos (2009), e.g., describes systems using automated deduction for language understanding tasks using formal knowledge. There are manually built formal ontologies such as SUMO (Niles and Pease, 2001) or Cyc (Lenat, 1995) and linguistic ontologies like Word- Net (Fellbaum, 1998) that capture linguistic and world knowledge to a certain extent. However, these resources either lack coverage or depth. Automatically constructed ontologies or taxonomies, on the other hand, are still of poor quality (Cimiano, 2006; Ponzetto and Strube, 2007). Attempts to automatically induce knowledge bases from text or encyclopaedic sources are currently not concerned with the distinction between generic and non-generic expressions, concentrating mainly on factual knowledge. However, rulelike knowledge can be found in textual sources in the form of generic expressions5. In view of the properties of generic expressions discussed above, this lack of attention bears two types of risks. The first concerns the distinction between classes and instances, regarding the attribution of properties. The second concerns modelling exceptions in both representation and inferencing. The distinction between classes and instances is a serious challenge even for the simplest methods in automatic ontology construction, e.g., Hearst (1992) patterns. The so-called IS-A patterns do not only identify subclasses, but also instances. Shakespeare, e.g., would be recognised as a hyponym of author in the same way as temple is recognised as a hyponym of civic building. Such a missing distinction between classes and instances is problematic. First, there are predicates that can only attribute properties to a kind (1.a). Second, even for properties that in principle can be attributed to individuals of the class, this is highly dependent on the selection of the quantifier’s restriction in context (3). In both cases, it holds that properties attributed to a class are not necessarily 5In the field of cognitive science, research on the acquisition of generic knowledge in humans has shown that adult speakers tend to use generic expressions very often when talking to children (Pappas and Gelman, 1998). We are not aware of any detailed assessment of the proportion of generic noun phrases in educational text genres or encyclopaedic resources like Wikipedia. Concerning generic sentences, Mathew and Katz (2009) report that 19.9% of the sentences in their annotated portion of the Penn Treebank are habitual (generic) and 80.1% episodic (non-generic). inherited by any or all instances pertaining to the class. Zirn et al. (2008) are the first to present fully automatic, heuristic methods to distinguish between classes and instances in the Wikipedia taxonomy derived by Ponzetto and Strube (2007). They report an accuracy of 81.6% and 84.5% for different classification schemes. However, apart from a plural feature, all heuristics are tailored to specific properties of the Wikipedia resource. Modelling exceptions is a cumbersome but necessary problem to be handled in ontology building, be it manually or by automatic means, and whether or not the genericity of knowledge is formalised explicitly. In artificial intelligence research, this area has been tackled for many years. Default reasoning (Reiter, 1980) is confronted with severe efficiency problems and therefore has not extended beyond experimental systems. However, the emerging paradigm of Answer Set Programming (ASP, Lifschitz (2008)) seems to be able to model exceptions efficiently. In ASP a given problem is cast as a logic program, and an answer set solver calculates all possible answer sets, where an answer set corresponds to a solution of the problem. Efficient answer set solvers have been proposed (Gelfond, 2007). Although ASP may provide us with very efficient reasoning systems, it is still necessary to distinguish and mark default rules explicitly (Lifschitz, 2002). Hence, the recognition of generic expressions is an important precondition for the adequate representation and processing of generic knowledge. 3 Prior Work **Suh (2006) applied a rule-based approach to automatically identify generic noun phrases.** **Suh used patterns based on part of speech tags that identify bare plural noun phrases**, **reporting a precision of 28.9% for generic entities**, **measured against an annotated corpus**, the ACE 2005 (Ferro et al., 2005). Neither recall nor f-measure are reported. To our knowledge, **this is the single prior work on the task of identifying generic NPs.**

#### **No violation—their Nebel ev isn’t about this resolution**

#### **Semantics are a floor not a ceiling—if we have a sufficiently predictable interpretation of the topic then division of ground is more important.**

#### **Standards:**

#### **1] Clash—allows us to go in-depth on particular parts of the literature which allows for more nuanced debates because different states are different. They overlimit by making whole res the only topical aff on the TOC topic which is devastating vs hyperspecific negs**

#### **2] Aff Ground—no advantage applies to all country pics because each arsenal is different and geopolitical implications change – pics are worse than aff spec since negs have generics like deterrence and NFU but affs don’t have any vs pics**

#### **3] No limits explosion—there are 8 states with nuclear weapons—do prep—there are no solvency advocates for random combinations**

## **1AR – DSB process**

#### **Process counterplans are a voting issue – skew 1ar strategy and kill aff ground by allowing the negative to center the debate around a point of contestation that is arbitrary, unpredictable, and divorced from topic literature – vote aff to deter**

#### **Perm do the CP:**

#### **We do have the WTO through the Council and eventually the DSB do the plan – your definition draws a distinction between “member nations” and “nations” – your competition argument assumes the plantext says “nations” alone**

#### **The CP is certain and immediate - you fiat certainty for the CP by fiating the US VETOs the plan and remaining nations should initiate proceedings against the US and immediacy by using “should” which is immediate.**

#### **Perm do the counterplan if the ICJ says yes – if they say yes the counterplans not functionally competitive – if they say no the case outweighs- Functional competition key –**

#### **it’s most portable – policymakers wouldn’t spend PC passing 2 bills that did the same thing even if they were worded slightly differently**

#### **textual competition encourages arbitrary and convoluted wording to generate artificial competition**

#### **Conditionality is a voting issue – it skews 1ar flexibility which is the arc of clash – depth is key to debate’s political value. It creates late developing debates, which moots the 1AR. Vote aff for deterrence.**

#### **High profile cases will fail– collapses the credibility of the organization**

**Tepper 8/13** [(Katherine Tepper, Senior Manager, External Economic Policy, BDI e.V.) “WTO: The Multilateral Trade Order in Danger” BDI The Voice of German Industry, 8/13/2021. https://english.bdi.eu/article/news/wto-the-multilateral-trade-order-in-danger/] BC

Significant Challenges Facing the WTO

Beginning in 2001, WTO members launched a major round of negotiations intended to modernise the WTO framework, to achieve new binding market access expansion, and to better integrate emerging economies into global supply chains – the Doha Development Agenda. **The negotiations failed,** however, after over ten years, mainly due to differences between industrialised nations such as the United States and emerging economies like China and India. Merely one, albeit very valuable, multilateral agreement resulted successfully from the Doha Round, the Trade Facilitation Agreement of 2017, which simplifies customs procedures. Plurilateral negotiation forums have emerged for the topics of electronic commerce, investment facilitation, trade and gender, and micro, small- and medium-sized enterprises. They are to serve as stepping stones for the multilateral process.

Dispute Settlement Mechanism (DSM) under Pressure

The DSM enables the settlement of trade disputes in a (mostly) timely, unpolitical, and amicable fashion and thereby promotes enforcement of WTO rules. **The number of disputes peaked in 2018 with 39 new conflicts**. This is considerably higher than in previous years: in both 2017 and 2016, 17 new disputes were registered. However, in 2019 only 19 conflicts were registered and in 2020 a mere five. As of June 2021, only four new complaints were filed. **This could be linked to** (see below) **the crisis of the dispute settlement mechanism.**

**Many of these disputes are highly political in their nature**. Currently, the United States is blocking the appointment of new members to the Appellate Body. **This led to a paralysis of the entire dispute settlement mechanism in December 2019**, which put the credibility of the WTO into question. The United States has complained for quite some time that the Appellate Body overreaches its mandate by creating new rules to which members have not explicitly agreed. They also criticised the long duration of processing dispute settlement cases, and that Appellate Body members were on occasion allowed to continue handling cases after leaving the body. Under the Trump administration, they went as far as to publish a 174-page report critiquing the Body, including the accusation that in their decisions the Appellate Body erroneously interpreted several terms and obligations in global trade law.

### **CRISPR turn**

#### **Chinese CRISPR innovation is good – it Is key to sustainable agriculture**

**Molteni 19** [(Megan, a science writer at STAT News. Previously, she was a staff writer at WIRED, covering biotechnology, public health, and genetic privacy.) “**Crispr Can Help Solve Our Looming Food Crisis—Here's How**” WIRED, 8/8/2019] TDI

In the US, six companies are currently developing Crispr-modified crops. **But it’s not clear how many of them will actually help feed the world more sustainably**. Corteva, DowDuPont’s agtech arm, will likely bring the first Crispr crop to market in the US—an even waxier waxy corn, which gets processed into food thickeners and adhesives. **To see where Crispr might transform the food supply to one that can survive the ravages of climate change, you have to go to China.**

According to a recent report in Science, China has been ramping up its Crispr crop work, with more than 20 labs dedicated to developing plants to feed the country’s swelling population. In 2013, the most recent year for which comparative figures exist, China **outspent the US** government on public funding of agricultural research more than **twice over**, pumping **$10 billion** into more than 1100 research institutions. And in 2017, the state-owned company ChemChina paid $43 billion for one of the world’s largest agribusinesses, Syngenta, which has a significant Crispr division. China still has yet to decide if it will follow the US’s lead with regards to regulation of Crispr crops, or if it will treat them the same as first-generation GMOs, as the European Union ruled last year.

In theory, Crispr and other genetic technologies could help reduce agriculture’s footprint in four big ways. One**, it could keep already established croplands productive in the face of a changing climate**, preventing the conversion of what remains of the planet’s wild areas to food production. Two, **it could reduce farmers’ reliance on fertilizers, by helping companies develop designer microbes that produce nitrogen for crops instead.** Three, **it could make raising livestock both more efficient**, more sustainable, and more humane. And lastly, but probably most realistically, it will help create crops with less spectacular traits that offer more incremental advances in efficiency—they **sequester more carbon,** **pack in more nutrients**, and **produce more food per acre with fewer inputs.**

#### **Food insecurity causes state collapse, nuclear war, and terror – extinction**

**DeFeo 17** [(Michael, Regional Organizing Director at Arizona Democratic Party who graduated in 2019 with a bachelor’s degree in political science from Gettysburg College) “Food Insecurity and the Threat to Global Stability and Security in the 21st Century” Inquires Journal, 2017] TDI

Poor Institutional Capacity

Although the developed world experiences food insecurity, it is the **lack of infrastructure and government institutions** in developing countries that contribute to civil wars and state fragility. **Foreign exchange shortages** can **provoke food and fuel scarcities that force governments to spend less on essential services and public goods.** Accordingly, citizens see their medical and educational entitlements melt away. Such circumstances **create breeding grounds for internal conflict.**

All violent conflicts destroy land, water, and social resources for food production. Developing countries do not have massive industrial machines that can remedy such losses, therefore, the population will suffer. **Food insecurity is a recruitment tool for violent extremist groups**. Promising food and water to a starving population, especially in urban areas, makes recruiting young and disgruntled youth easier (Messer & Cohen, 2015). Syria had limited institutional capacity to deal with the mass displacement, and that lead to a civilian revolt and recruitment into the Islamic State.

Countries that fail to provide their people with basic services often experience gross economic inequality, and even human-rights violations, as was the case in both Syria and Sudan. Both countries are classified as Least Developed Countries (LDCs). LDCs are distinguished not just by their widespread poverty, but also by their structural weaknesses in economic, institutional, and human resources that make them unable to maintain stability during a drought. The combination of drought and political instability or violence led to famine in Somalia (another LDC) in 2011. Even with urgent humanitarian action, the country still plunged into chaos and violence (Messer & Cohen, 2015). Severe drought, like Somalia's, may result in crop failure in major food producing areas, which in turn is a significant threat to social stability and peace (Wischnath, 2014).

Sometimes droughts of exceptional severity (and the civil unrest that follows) are attributed to climate change, especially in particularly arid regions. Scholars are divided on whether climate change actually impacts civil conflict. That is why African countries like Somalia and Sudan are prime case studies. Africa has the lowest percentage of irrigated land in the world. Agriculture is the most important sector of most African countries. Very high percentages of civilians in African countries live in rural areas. Those characteristics combined with low economic and state capacity make African, particularly sub-Saharan African countries the most vulnerable to climate change and civil instability. Africa experiences more civil conflict than other parts of the world, therefore, it is possible to argue that a lack of climate variability effect on civil conflict in Africa would make it unlikely to cause civil conflict in other parts of the world (Koubi et al., 2012). Secretary-General of the United Nations, Ban Ki-moon attributed the conflict in Darfur to an ecological crisis arising “at least in part from climate change” (Ki-moon, 2007). The Fourth Report of the Intergovernmental Panel on Climate Change assessed that climate change will continue to worsen. As it does, it will increase food shortages, which may lead to conflict (AR4, 2007). The report also stated that forced displacement and rising social instability is the most likely result of food insecurity. This is almost exactly what happened in Syria. The first step towards conflict might be food riots, which often occur during a food shortage or when there is an unequal distribution of food. These are usually caused by food price increases, food speculation, transport problems, or extreme weather. In 1977, Egyptians became so desperate for food that they attacked shops, markets, and government buildings just to obtain bread and grain (Paveliuc-Olariu, 2013).

Moreover, civil war can create economic opportunities for certain groups, so they try to avoid resolving the conflict. Urban elites in Somalia profited tremendously off of internal conflict because of the absurd amount of foreign aid that was pumped into the country and then largely stolen (Shortland, Christopoulou, & Makatsoris, 2013). **Once a country experiences a food shortage, it may lead to protests, riots, and violence**. This all contributes to state instability, but it is not the state alone that suffers. **If one country fails, it creates a crisis that could destabilize an entire region**.

State Failure and the Threat to Regional Stability

Although fragile governments in developing countries are at a heightened risk for internal conflict that could topple them, that risk also threatens the country’s neighbors. After the Soviet Union collapsed in 1991, Afghanistan found itself alone in regional trade. Without a guaranteed source of cereal, the government had to turn to Iran and Pakistan for support in order to avoid its own collapse (Clarke, 2000). Unlike Afghanistan, many other developing countries have been unable to work together on food and water security. Thirteen of the twenty-two members of the Arab League rank among the most water-scarce nations on the planet. Food cannot be grown without water. The majority of the world is engaged in some sort of agreement with neighboring countries to share water supplies, but thirty-seven countries still do not share their water resources (El Hassan, 2014). Lack of cooperation can cause civil as well as interstate conflict. South Sudan legally has no share of the Nile River and the effects of that lack of water access have been mass starvation and violence.

The effects of climate change, water shortages, and mass migrations have resulted in acute food insecurity not just in Syria, but across the region (El Hassan, 2014). Food insecurity, plus an increase in the prices of staple foods have destabilized much of the area. The Arab Spring was the beginning of multiple conflicts that have affected countries like Syria, Egypt, and Libya. In Syria, food insecurity resulted in mass violence and has now created an international crisis involving multiple world powers.

**Food insecurity is such a threat to entire regions because people cannot live without food and people want to live**. When a region experiences food scarcity and that population feels threatened by hunger, it will relinquish dependency on any political authority and take up arms in order to ensure its well-being (Paveliuc-Olariu, 2013). This is human survivalism. It is important for developing countries in areas that are at risk for food insecurity to formulate policy that ensures aid goes to the food insecurity hotspots so as to maintain stability.

South Sudan experienced what happens when countries do not work together to feed their people. After gaining its independence from Sudan in 2011, 360,000 South Sudanese refugees returned to the country. This influx of human beings, coupled with drought conditions exacerbated economic strain and drove food prices up. The increases were the result of trade restrictions between Sudan and South Sudan. The overall reason for the food crisis, however, was the government's preoccupation with fighting a political and quasi-ethnic civil war rather than negotiating fair access to the Nile River (Tappis et al., 2013). Because of South Sudan’s weak institutions, it has done little to address the food shortage. That inability to solve the problem fuels insurgent recruitment that continues the bloodshed in South Sudan. The conflict is keeping regional rivalries alive with Uganda, Kenya, Ethiopia, and Sudan; all of whom have attempted to intervene in South Sudan militarily to bring about stability (Council on Foreign Affairs 2016). Aside from South Sudan, multiple conflicts across Africa are consuming massive amounts of diplomatic, political, and humanitarian resources in a region that faces a multitude of threats.

South Sudan, Somalia, and Syria are all failing states that are experiencing huge food shortages, humanitarian crises, and most importantly, extreme civil violence. South Sudan is mired in a civil war. Somalia is controlled by warlords and terror organizations. Syria has both of those problems. Conflict has turned these countries into “breeding grounds of instability, mass migration, and murder” rather than sovereign states with a monopoly on violence and control over their borders (Rotberg, 2002). To be sure, failing states are a concern because of their ability to destabilize entire regions, but states at risk for failure are also very important. Countries like Pakistan that are politically unstable and have food and water shortages could result in uncontrollable civil upheaval (The Fund for Peace, 2016).

**Global Consequences of State Failure**

Failing states and destabilized regions are not just a problem for the developing world. **They are a very real concern for the United States and other developed countries as well.** The Islamic State fed off of the Syrian Civil War and helped destabilize Iraq, Syria, Libya, and even Afghanistan and the Philippines. They have at also inspired terror attacks in Europe and the United States. **They are a threat to both the developed and developing world**. State instability allows them to recruit and train without government interference, which in turn allows them to plan attacks outside the region. An important source of income for the Islamic State has been agriculture from Iraq and Syria. While this revenue has received less media attention than oil extraction, it is still an important part of their economy (Jaafar & Woertz, 2016). It is also a key aspect of their political legitimacy because it allows them to feed their soldiers and those they control. Controlling some of the most fertile regions of the two countries has also helped the Islamic State starve off areas that have resisted them (Jaafar & Woertz, 2016). If Syria or Iraq are ever going to stabilize, those breadbaskets must be retaken and the food must reach the civilians in the cut off areas.

In the 20th century, state failure had few implications for international peace and security. **Thanks to globalization, that is no longer the case.** Failed states pose a threat to **themselves**, their **neighbors**, and the entire **international community** (Rotberg, 2002). Islamic State - inspired terror attacks in Belgium and France are a direct result of state collapse in Syria and Iraq. Preventing states from failing, rather than having to intervene militarily when they do, ought to be a top priority in the foreign policy of rich nations. Although the situations in Syria, Somalia, and South Sudan seem beyond repair, nation-building projects have had success in the past. Tajikistan, Lebanon, Cambodia, Kosovo and East Timor are all examples of relatively successful attempts to put failing states back on the right track (Rotberg, 2002). Developed countries must have the political will to ensure that people in developing countries are fed so that they remain pacified. **It is often severe food insecurity that precedes ethnic or religious violence**, as has been the case in South Sudan, therefore, **adequate food is paramount to avoiding humanitarian crises that accompany ethnic and sectarian conflict** (The Economist, 2016).

While it is true that many developed countries, especially the United States, are weary of providing so much financial aid and intervening militarily in war-torn, developing countries, it is imperative that the rich do not abandon the poor to a fate of internal destruction. Money must not be thrown blindly towards humanitarian crises and military intervention must be the last resort. Developed countries provided $1.4 billion for humanitarian aid in South Sudan in its first year of independence, but without specific conditions, that money went to kleptocrats rather than infrastructure projects or public services (The Economist, 2016).

Paying to help developing nations is expensive and will continue to be so. Afghanistan and Iraq are proof of that. But the war on terror, repeated military intervention, and humanitarian aid are expensive as well. In 2002, Robert Rotberg suggested that a new Marshall Plan was required for places like Afghanistan, the DRC, Sierra Leone, Somalia, and Sudan. If it is true that food and water security are the keys to keeping relative peace in new and developing countries and their collapse threatens the safety of the developed world, it seems logical that assisting those countries is wise.

In 1999, Susan L. Woodward argued that military leaders focus too much on force versus force combat rather than the issues of insurgency and terrorism in failed states. In 2017, military leaders have adjusted their strategies accordingly. Woodward believed that globalization made states less important, but their failure would still be felt around the world. Failed states cannot exercise their monopoly on violence and they cannot control their borders, thus threatening more than just the failed state (Woodward, 1999). Because state failure is so consequential, the United States military must continue to look into measures it can take to prevent it.

The Threat of the Future

Finally, the threats from food shortages in South Sudan, Somalia, Afghanistan, Iraq, and Syria are important to the United States and the international community at large, but there is one country that, while it is not a failing state right now, could easily become one if the wealthy nations of the world do not ensure its stability. That country is **Pakistan**. The Fund for Peace ranked Pakistan as the 14th most fragile state in the world in 2016, giving it a “High Alert” designation for state failure (The Fund for Peace, 2016). Its Demographic Pressure Indicator was an 8.9 - 10.2 Although it improved by one-tenth of a point last year, its decade trend is worse by seven-tenths of a point and its five-year trend is worse by four-tenths of a point, suggesting that the food situation is actually worsening overall (The Fund for Peace, 2016). If internal conflict and potential state failure at its most basic level begins with food and water insecurity, then Pakistan could become a real problem very soon.

Considering the risk of state failure, Pakistan poses the greatest threat to the rest of the world because of the existence of **nuclear weapons** within the country. Pakistan is not a member of the Nuclear Non-Proliferation Treaty, yet it has about 120 nuclear weapons. It also has a Shaheen 1A ballistic missile that can reach targets 550 miles away (Pakistan Defence, 2015). Should a food crisis arise in Pakistan that results in civil war and governmental collapse, those weapons could end up in the hands of a group that intends to use them maliciously as an act of terror. **That prospect should be incentive enough for the developed countries to realize that they cannot and must not leave food insecure countries to devour themselves.**

While it is difficult to argue that food insecurity immediately and directly causes civil conflict, there is no denying **that people need food and water and will fight to survive**. In South Sudan, ethnic and political armies fight one another. In Syria, rebels and government forces fight each other while also fighting the Islamic State. And in Somalia, warlords and their armies fight. The Syrian Civil War began six years ago after a water shortage forced thousands of migrants into urban centers. Developing countries tend to be most affected by climate change, poor governance, and food price increases. Therefore, they are the most prone to instability that may lead to outright violence. Without the wherewithal to handle civil conflict, these countries may become fragile or even failing states. Once that happens, they represent a threat not just in their region of influence, but the whole world. That is why the **developed Western nations must pay attention and provide aid to the developing world in order to maintain stability**. **There will be more food crises in developing countries in the future**, but if the North has the strength to continue aiding the South, perhaps it will be able to curb mass starvation and avoid the horrendous violence that consumes starving countries.

1] perm do both- they are plan plus

2] no solvency

A] case us is making isn’t against china and when loses to court- encouraging china to steal more tech

3] perception turn- us being ruled against will make everyone think us is weak

4] double bind- either fiat us compliance or not proves abuse

5] process cps voter- get to use net benefits as da’s- a] fairness- gives neg finite solvency b] education - encourages uniforming 1ac’s ignore core topic education

6] multi actor fiat is a voters-destroys debate

Non rep circle wreck

Generate artificial ground

8] non unique- DSB credibility high

Innovation-

**Feldman 3** Robin Feldman 2-11-2019 "‘One-and-done’ for new drugs could cut patent thickets and boost generic competition" <https://www.statnews.com/2019/02/11/drug-patent-protection-one-done/> (Arthur J. Goldberg Distinguished Professor of Law, Albert Abramson ’54 Distinguished Professor of Law Chair, and Director of the Center for Innovation)//SidK + Elmer

I believe that one period of protection **should be enough**. We should make the legal changes necessary to prevent companies **from building patent walls** and piling up mountains of rights. This could be accomplished **by a “one-and-done” approach** for patent protection. Under it, a drug would receive just one period of exclusivity, and no more. The choice of which “one” could be left entirely in the hands of the pharmaceutical company, with the election made when the FDA approves the drug. Perhaps development of the drug went swiftly and smoothly, so the remaining life of one of the drug’s patents is of greatest value. Perhaps development languished, so designation as an orphan drug or some other benefit would bring greater reward. The choice would be up to the company itself, based on its own calculation of the maximum benefit. The result, however, is that a pharmaceutical company chooses whether its period of exclusivity would be a patent, an orphan drug designation, a period of data exclusivity (in which no generic is allowed to use the original drug’s safety and effectiveness data), or something else — but **not all of the above** and more. Consider Suboxone, a combination of buprenorphine and naloxone for treating opioid addiction. The drug’s maker has extended its protection cliff eight times, including obtaining an orphan drug designation, which is intended for drugs that serve only a small number of patients. The drug’s first period of exclusivity ended in 2005, but with the additions its protection now lasts until 2024. That makes almost two additional decades in which the public has borne the burden of monopoly pricing, and access to the medicine may have been constrained. Implementing a one-and-done approach in conjunction with FDA approval underscores the fact that these problems and solutions are designed for pharmaceuticals, not for all types of technologies. That way, one-and-done could be implemented through **legislative changes to the FDA’s drug approval system**, and would apply to patents granted going forward. One-and-done would apply to both patents and exclusivities. A more limited approach, a baby step if you will, would be to invigorate the existing patent obviousness doctrine as a way to cut back on patent tinkering. Obviousness, one of the five standards for patent eligibility, says that inventions that are obvious to an expert or the general public can’t be patented. Either by congressional clarification or judicial interpretation, many pile-on patents could be eliminated with a ruling that the core concept of the additional patent is nothing more than the original formulation. Anything else is merely an obvious adaptation of the core invention, modified with existing technology. As such, the patent would fail for being perfectly obvious. Even without congressional action, a more vigorous and robust application of the existing obviousness doctrine could significantly improve the problem of piled-up patents and patent walls. Pharmaceutical companies have become adept at maneuvering through the system of patent and non-patent rights to create mountains of rights that can be applied, one after another. This behavior lets drug companies keep competitors out of the market and beat them back when they get there. We shouldn’t be surprised at this. Pharmaceutical companies are profit-making entities, after all, that face pressure from their shareholders to produce ever-better results. If we want to change the system, we must change the incentives driving the system. And right now, the incentives for creating patent walls are just too great.

#### **We are in an innovation crisis – new drugs are not being developed in favor of re-purposing old drugs to infinitely extend patent expiration.**

**Feldman 1** Robin Feldman 2-11-2019 "‘One-and-done’ for new drugs could cut patent thickets and boost generic competition" <https://www.statnews.com/2019/02/11/drug-patent-protection-one-done/> (Arthur J. Goldberg Distinguished Professor of Law, Albert Abramson ’54 Distinguished Professor of Law Chair, and Director of the Center for Innovation)//SidK + Elmer

Drug companies **have brought great innovations** to market. Society rewards innovation with patents, or with non-patent exclusivities that can be obtained for activities such as testing drugs in children, undertaking new clinical studies, or developing orphan drugs. The rights provided by patents or non-patent exclusivities provide a defined time period of protection so companies can recoup their investments by charging monopoly prices. When patents end, lower-priced competitors should be able to jump into the market and drive down the price. **But that’s not happening**. Instead, drug companies build massive patent walls around their products, extending the protection **over and over again**. Some modern drugs have an avalanche of U.S. patents, with expiration dates **staggered across time**. For example, the rheumatoid arthritis drug Humira is **protected by more than 100 patents**. Walls like that **are insurmountable**. Rather than rewarding innovation, our patent system is now largely repurposing drugs. Between 2005 and 2015, **more than three-quarters** of the drugs associated with new patents **were not new ones** coming on the market but existing ones. In other words, we are mostly churning and recycling. Particularly troubling, new patents can be **obtained on minor tweaks** such as adjustments to dosage or delivery systems — a once-a-day pill instead of a twice-a-day one; a capsule rather than a tablet. Tinkering like this may have some value to some patients, but it nowhere near justifies the rewards we lavish on companies for doing it. From society’s standpoint, incentives should drive scientists back to the lab to look for new things, not to recycle existing drugs for minimal benefit.

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## **On second cp**

Net benefit is innovation

Quality Control DA: massive expansion of medicines bought in bulk leads to significantly worse medicines being manufactured since it costs more to develop good medicines this will lead to worse medicines being produced since they must be produced at a higher scale.

Turn: the aff reduces medicine access since us will make medicines contingent on factors like political allegiances i.e., you must be loyal to the US to get vaccines.

Turn: the aff decreases access to medicines because companies will produce fewer drugs if the know they can’t get as much economic rewards. Most companies only make money based of mass-producing one drug, but the aff takes that route away from them.

#### **Disad non-UQ—no way dems win 2022**

1. Kilgore 8-17 [Ed Kilgore is a political columnist for New York magazine and the managing editor of the Democratic Strategist, an online magazine. Kilgore is a former senior fellow at the centrist Progressive Policy Institute, and a contributor to the Washington Monthly where he wrote the Political Animal blog. He has also written for the New Republic, and served as policy director for the centrist Democratic Leadership Council**. Biden’s Approval Ratings Slip Below 50 Percent** for the First Time, 8-17-2021, https://nymag.com/intelligencer/2021/08/biden-approval-ratings-slip-below-50-percent.html, 9-1-2021 amrita]
2. For the first five months of Joe Biden’s presidency, his job-approval ratings were amazingly stable. As CNN’s Harry Enten put it in late May after a crazy stretch of news, “It’s almost as if no event seems to really change public opinion.” We didn’t know this at the time, but the president’s approval ratings were peaking and beginning to drift downward just as Enten was writing. This week, **his approval averages at both FiveThirtyEight (which uses weighted and adjusted numbers) and RealClearPolitics (which uses raw averages) slipped just below 50 percent**. Now, **Republicans will claim Biden is massively losing popularity because of** (depending on the day and who’s doing the spinning**) the Taliban victory in Afghanistan, inflation fears, reaction to his COVID-19 policies, or the socialism implicit in his budget**. Truth is, **some of the polls in these averages were taken before the drama broke out in Kabul, and averages are just averages:** In the past week, Biden’s approval ratings have ranged from 45 percent (Rasmussen) to 53 percent (Fox News). And while there is a downward drift, it’s hardly precipitous, and Biden’s lowest average is still higher than Trump’s highest over his four years in office. **There is, moreover, thanks to steadily increasing partisan polarization, a pretty firm ceiling and floor on any president’s approval numbers these days. Still,** as FiveThirtyEight’s Geoffrey Skelley points out, **Biden has been slowly but surely losing ground with self-identified independents, and the trend cannot be strictly attributed to jitters associated with the Delta variant: Biden’s ratings among independents have fallen in recent weeks — a sample of polls conducted since early July by Morning Consult, The Economist/YouGov and Ipsos suggests Biden’s approval with this group has fallen by an average of 2 to 4 percentage points in recent weeks.** But **Biden had already been slowly losing ground among independents**. For instance, Biden’s approval among independent voters in Morning Consult’s polling has trended downward since he took office, from around the low 50s to the low 40s. That’s a very slow descent over the past eight months, but **it’s also a trend that predates the surge in American cases of the Delta variant.** It’s also worth noting that **Biden’s disapproval rating has gone up a bit more than his favorability rating has gone down.** His average disapproval number at RCP was at 41.3 percent in late May; it’s at 46.8 percent now. It’s too early to make any judgments about Biden’s odds for reelection in 2024, assuming he runs. **But it’s not too early to begin to speculate about the 2022 midterms, in which Democrats will be fighting to hold on to a tie in the Senate** (which gives them control thanks to the tie-breaking vote of Vice-President Kamala Harris) **and a three-seat margin in the House.** **Only twice** since World War II **has the president’s party gained House seats in a midterm election. In both cases, the president in question** (Bill Clinton in 1998 and George W. Bush in 2002) **had a Gallup approval rating over 60 percent just prior to the vote**. Two other presidents with 60-plus approval ratings lost House seats (Kennedy in 1962 and Reagan in 1986), while four other presidents with approval ratings in the 50s (Eisenhower in 1954 and 1958, Nixon in 1970, Ford in 1974, and Poppy Bush in 1990) lost even more House seats**. Given both polarization and the trickiness of today’s issue environment, which has been made insanely unpredictable by COVID, it’s not a very good bet that Biden will get the kind of approval bump he would need to put him in the territory of past midterm winners.** Maybe he’ll be smart and lucky, and maybe the opposition (thanks to its identification with a 45th president who will not go away) will help Biden make 2022 the rare midterm that isn’t a referendum on the sitting president. But all in all, the **46th president and his allies should probably stop worrying about his approval ratings and just get as much done as they possibly can** while they still control Congress.

#### **Plan boosts US heg.**

Borjas 21 – Andres Borjas is a Staff Writer at The Tufts Daily. Andres is a senior studying international relations and can be reached at [andres.borjas@tufts.edu](mailto:andres.borjas@tufts.edu); “In response to crises, the US has chosen to weaponize its vaccine policy as a diplomatic tool”; April 7, 2021; <https://tuftsdaily.com/opinion/2021/04/07/in-response-to-crises-the-us-has-chosen-to-weaponize-its-vaccine-policy-as-a-diplomatic-tool/> // advay

Possessing one of the largest stockpiles of COVID-19 vaccines, the United States holds special weight when it comes to distributing the vaccines worldwide, and the concept of “vaccine diplomacy” is becoming an evermore important buzzword for American foreign policy. Policymakers, however, increasingly view the United States’ COVID-19 response as a weaponized diplomatic tool. This perception works to no one’s benefit and more fundamentally exposes a half-heartedness and fragility to U.S. foreign policy that does not bode well for the return of American global leadership in the near future. At the core of this weaponized model of vaccine diplomacy lies the national anxieties that made up the core of “America first” and that now pervade vaccine policy, shaping the issue into a matter of national security and foreign policy. This need to “securitize” vaccines is driven by the now all-too-common feelings of individual, social and national insecurity that the pandemic has highlighted and exacerbated across the country. The botched initial response to the pandemic left the United States as the most COVID-19-ridden country on the face of the earth. By summer, polls began showing a growing loss in social trust and national pride. The national unease brought a moment of renewal for anti-vaxxers and other conspiracy theorists who shouted through their keyboards about “plandemics,” cabals and Bill Gates to a receptive audience facing a shattered world. These factors all aided in catalyzing the political violence that transpired during the Capitol insurrection on Jan. 6, an event that has been considered the first American self-coup. China, meanwhile, leveraged the opportunities arising from America’s internal upheaval by challenging the United States militarily in the South China Sea and assuming a leading role in supplying the world with vaccines and desperately needed medical equipment. Needless to say, many saw 2020 as the poignant end of American primacy. For an America scarred internally and scorned internationally, the vaccine was a path toward renewed security and power. After our annus horribilis, the world has seen the fragility of American cohesion and has questioned the country’s claims to hegemony. Back to normal as fast as possible, as such, is not as much the preference of a rich country that can afford it, but rather a necessity for its survival. This is the rationale that attempts to justify the fact that for every one American there are about four vaccine doses reserved. Meanwhile, in the whole of Africa, that number barely reaches 0.2 doses per person. In all, only 10 countries have administered about three-fourths of all vaccine doses. For the United States, this hoarding is symptomatic of a desperation to prevent the next wave of social unrest — one jab at a time, all the while disregarding the Global South’s struggles, where many countries may not receive enough supply to vaccinate the majority of their populations until several years down the line. Even while some semblance of self-denial has found its way into U.S. foreign policy, the thinness of promises made is hard to miss. Biden’s donation of more than 2.5 million AstraZeneca doses to Mexico, while amounting to the largest vaccine transfer from one country to another, seems meaningless when considering America’s 300 million strong AstraZeneca stockpile might simply end up unused. In other less publicized instances, the vaccine paranoia has been more clear. In February, the United States backed other rich nations in opposing a waiver to the Agreement on Trade-Related Aspects of Intellectual Property Rights, which would allow for widespread production of COVID-19 vaccines and other treatments without infringing on international property rights. This arrangement benefits Moderna and Pfizer the most, the country’s vaccine champions, who are now the face of American power, centrality and indispensability in the same vein that other powerful entities, like Google, Amazon and Facebook, have been for decades. The vaccine is also key to recouping power vis-a-vis China. President Biden took the opportunity this March during the first summit of the Quadrilateral Security Dialogue, the joint project of Australia, India, Japan and the United States to contain China, to announce the bloc’s vaccination initiative. Not surprisingly, great power competition infuses the core of this joint project, as the Quad members aim to provide their vaccines to Southeast Asia as a means of keeping China’s out. The U.S. posture is a shrewd reminder that in international politics, altruism will almost always come second. Even while Americans have often played the role of the good Samaritan worldwide, especially in the realm of global health, right now, we are a country backed into a corner, looking to claw our way back. Internally, even as the choice to not widely share the vaccine incurs heavy costs — the loss of countless lives around the world and billions of dollars in trade — large stocks and lofty promises are upheld as a matter of national security. Externally, vaccines offer an avenue to regain the world’s adoration, thus transforming into a central component of a foreign policy seeking to protect American hegemony. Until the United States feels safe, the rest of the world will not be.

### **1rst adv is Econ**

### **Vaccines will not cover LMICS until at least 2023—fortunately there is massive room for supply increase**

Nancy S. **Jecker &** Caesar A. **Atuire 21**. \*Department of Bioethics & Humanities, University of Washington School of Medicine, \*\*Department of Philosophy, University of Johannesburg, Auckland Park, Gauteng, South Africa, “What’s yours is ours: waiving intellectual property protections for COVID-19 vaccines,” Journal of Medical Ethics, July 6, 2021, <https://jme.bmj.com/content/medethics/early/2021/07/06/medethics-2021-107555.full.pdf>., RJP, DebateDrills.

Since consequentialist justifications treat the value of IP as purely instrumental, they are also vulnerable to counterarguments showing that a sought-after goal is not the sole or most important end. During the COVID-19 pandemic, we submit that the vaccinating the world is an overriding goal. With existing IP protections intact, the world has **fallen well short** of this goal. Current forecasts show that at the current pace, there will **not be enough vaccines to cover the world’s population** until 2023 or 2024.15 IP protections further frustrate the goal of universal access to vaccines by limiting who can manufacturer them. The WHO reports that 80% of global sales for COVID-19 vaccines come from five large multinational corporations.16 Increasing the number of manufacturers globally would not only **increase supply,** but reduce prices, making vaccines more affordable to LMICS **L[ow and] M[iddle] I[ncome] C[ountrie]s. I**t would stabilise supply, minimising disruptions of the kind that occurred when India halted vaccine exports amidst a surge of COVID-19 cases.

It might be objected that waiving IP protections will not increase supply, because it takes years to **establish manufacturing capacity**. However, since the pandemic began, we have learnt it takes less time. Repurposing facilities and vetting them for safety and quality can often happen in 6 or 7months, about half the time previously thought.17 Since COVID-19 will not be the last pandemic humanity faces, expanding manufacturing capacity is also necessary preparation for **future pandemics**. Nkengasong, Director of the African Centres for Disease Control and Prevention, put the point bluntly, ‘Can a continent of 1.2billion people—projected to be 2.4billion in 30 years, where one in four people in the world will be African—continue to import 99% of its vaccine?’18

#### **Unequal vaccine distribution has massive economic costs even with conservative estimates that don’t account for the Delta variant**

**Çakmakli 21**-- Çakmakli, Cem [Assistant Professor at Koç University. PhD: Pennsylvania State University] et al. The economic case for global vaccinations: An epidemiological model with international production networks. No. w28395. National Bureau of Economic Research, 2021. (AG DebateDrills)

**To estimate the costs of inequitable vaccine distribution, we develop a global SIR-multi-sectormacro framework and calibrate it to 65 countries-35 sectors.** We incorporate sectoral heterogeneity in infections together with inter-industry and international trade and production linkages. **Once we account for this economic interdependence of the economies, we reveal the substantial costs, up to 3 percent of advanced countries pre-pandemic GDPs, that will be borne by the vaccinated countries through their trade relationships with unvaccinated countries.**36 Our framework captures the short run. **We find that AEs may bear somewhere from 13 percent to 49 percent of the global losses arising from an inequitable distribution of vaccines in 2021. Globalization might have amplified the effects of the pandemic but it is also imperative for an equitable distribution of the vaccines because this is the only way for open economies with international linkages to have a robust recovery.** There are substantial uncertainties ahead of us regarding the course of vaccine distribution. Our estimates are based on the available information about the pandemic. For example, we did not incorporate the recent developments on the variants into our analysis. **To the extent that these variants threaten the efficacy of the current vaccines, there is even more urgency to make the existing vaccines globally available as soon as possible. Mutations that risk a prolonged pandemic would not only have further health costs but also escalate the economic costs that we estimated in our analysis.**

#### **Economic loss and slow supply recovery causes inflation deanchoring and econ collapse in advanced economies as well as extreme poverty in EMDEs**

**World Bank 6-21** – World Bank Prospects Group; June 2021 Global Economic Prospects; <https://openknowledge.worldbank.org/bitstream/handle/10986/35647/9781464816659.pdf> (AG DebateDrills)

**Since May 2020, however, inflation has gradually picked up.** **By April 2021, inflation had risen above pre-pandemic levels, in both advanced economies and EMDEs**. The inflation pickup was broad-based and present in about four-fifths of countries, although the change in inflation varied widely, especially in EMDEs. The 2020 global recession featured the most muted inflation decline and fastest subsequent inflation upturn of the five global recession episodes of the past 50 years (box 4.1). While this behavior partly reflects lower levels of inflation at the beginning of 2020, purchasing managers report growing pressures on input as well as output prices in 2021 (figure 4.1). **Looking ahead, as the global economy gradually reopens, monetary and fiscal policies continue to be accommodative to support the global recovery, and pent-up demand may be about to be unleashed in advanced economies.1 For major advanced economies, some have raised concerns that this confluence of factors may generate significant inflationary pressures** (Blanchard and Pisani-Ferry 2020; Goodhart and Pradhan 2020; Landau 2021). Others, in contrast, see little reason for concern, at least for many advanced economies, because of the temporary nature of price pressures over the short-term as well as wellanchored inflation expectations and structural factors still depressing inflation (Ball et al. 2021; Gopinath 2021). If growing inflationary pressures cause financial market participants to become concerned about persistently higher inflation in advanced economies, they may reassess prospects for continued accommodative monetary policies by major central banks. **This could trigger a significant rise in risk premia and borrowing costs. EMDEs are particularly vulnerable to such financial market disruptions because of their record high debt and a lagging economic recovery from the pandemic (chapter 1). In the event of financial market stress, sharp exchange rate depreciations and capital outflows may force them to abruptly tighten policies in a manner that could throttle their recoveries. Even in the absence of dislocating financial market stress, EMDES E[merging] M[arket] D[eveloping] E[conomie]s may face rising inflation as global price pressures feed into domestic inflation through input prices and exchange rate movements**. A temporary increase in inflation may not warrant a monetary policy response. Again, if rapidly rising price pressures risk de-anchoring inflation expectations, EMDE central banks may be forced to tighten monetary policy before the recovery is fully entrenched. **Persistently higher inflation would erode discretionary incomes of the poorest households and may tip some back into poverty** (Ha, Kose, and Ohnsorge 2019). **This is a particularly serious risk for LMICS low-income countries** (LICs; box 4.2). **Since food accounts for a substantial share of consumption in these countries, recent increase in food prices have led to higher inflation and compounded the challenges confronting the poor during the pandemic.**

#### **Economic Collapse goes Nuclear.**

**Tønnesson 15**, Stein. "Deterrence, interdependence and Sino–US peace." International Area Studies Review 18.3 (2015): 297-311. (the Department of Peace and Conflict, Uppsala University, Sweden, and Peace research Institute Oslo (PRIO), Norway)

Several recent works on China and Sino–US relations have made substantial contributions to the current understanding of how and under what circumstances a combination of nuclear deterrence and economic interdependence may reduce the risk of war between major powers. At least four conclusions can be drawn from the review above: first, those who say that interdependence may both inhibit and drive conflict are right. Interdependence raises the cost of conflict for all sides but asymmetrical or unbalanced dependencies and negative trade expectations may generate tensions leading to trade wars among inter-dependent states that in turn increase the risk of military conflict (Copeland, 2015: 1, 14, 437; Roach, 2014). The risk may increase if one of the interdependent countries is governed by an inward-looking socio-economic coalition (Solingen, 2015); second, the risk of war between China and the US should not just be analysed bilaterally but include their allies and partners. Third party countries could drag China or the US into confrontation; third, in this context it is of some comfort that the three main economic powers in Northeast Asia (China, Japan and South Korea) are all deeply integrated economically through production networks within a global system of trade and finance (Ravenhill, 2014; Yoshimatsu, 2014: 576); and fourth, **decisions for war and peace are taken by very few people, who act on the basis of their future expectations**. International relations theory must be supplemented by foreign policy analysis in order to assess the value attributed by national decision-makers to economic development and their assessments of risks and opportunities. If leaders on either side of the Atlantic begin to seriously fear or anticipate their own nation’s decline then they may blame this on external dependence, appeal to anti-foreign sentiments, contemplate the use of force to gain respect or credibility, adopt protectionist policies, and ultimately refuse to be deterred by either nuclear arms or prospects of socioeconomic calamities. **Such a dangerous shift could happen abruptly**, i.e. under the instigation of actions by a third party – or against a third party. Yet as long as there is both nuclear deterrence and interdependence, the tensions in East Asia are unlikely to escalate to war. As Chan (2013) says, all states in the region are aware that they cannot count on support from either China or the US if they make provocative moves. The **greatest risk is not that a territorial dispute leads to war under present circumstances but that changes in the world economy** alter those circumstances in ways that render inter-state peace more precarious. If China and the US fail to rebalance their financial and trading relations (Roach, 2014) then a trade war could result, interrupting transnational production networks, provoking social distress, and exacerbating nationalist emotions. This could have unforeseen consequences in the field of security, with nuclear deterrence remaining the only factor to protect the world from Armageddon, and unreliably so. Deterrence could lose its credibility: one of the two great powers might gamble that the other yield in a cyber-war or conventional limited war, or third party countries might engage in conflict with each other, with a view to obliging Washington or Beijing to intervene.

**Adv 2 – WTO Legitimacy**

**WTO credibility is fragile right now– Baschuk 21**

Bryce Baschuk, “WTO Chief Pursues a ‘Hectic’ Agenda to Fix World Trade’s Referee”, April 27 2021

<https://www.bloomberg.com/news/articles/2021-04-27/wto-chief-pursues-a-hectic-agenda-to-fix-world-trade-s-referee>

**The head of the WTO 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.”

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 IP intellectual property for vaccines and other essential medical products.**

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.](https://www.bloomberg.com/quote/PFE:US) and [AstraZeneca Plc](https://www.bloomberg.com/quote/AZN:LN) 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.**

**A TRIPPS waiver is necessary to maintain WTO credibility – Meyer 21**

Meyer, David, “The WTO’s survival hinges on the COVID-19 vaccine patent debate, waiver advocates warn”, June 18, 2021

<https://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](https://fortune.com/2021/04/01/wto-chief-covid-vaccine-manufacturers-poor-countries/), 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**](https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/IP/C/W669R1.pdf&Open=True)**—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](https://www.wto.org/english/res_e/publications_e/ai17_e/wto_agree_art9_jur.pdf) in exceptional circumstances, and indeed this has happened before: its members [agreed in 2003](https://www.wto.org/english/news_e/pres03_e/pr350_e.htm) 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](https://www.wto.org/english/news_e/news17_e/trip_23jan17_e.htm) 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](https://fortune.com/2021/05/06/covid-vaccine-patent-waiver-protections-rights-waiver-biden-next/) from opposing the idea of a waiver to supporting it, [as did France](https://fortune.com/2021/06/10/covid-vaccine-patent-waiver-european-parliament-commission-wto/).

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](https://www.reuters.com/article/us-usa-trade-wto-idUSKCN1LC19O) 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](https://www.gtreview.com/news/americas/slim-chances-for-the-wto-appellate-body-despite-the-us-return-to-multilateralism/). "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](https://fortune.com/2021/05/06/covid-vaccine-patent-waiver-protections-rights-waiver-biden-next/). "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](https://trade.ec.europa.eu/doclib/docs/2021/february/tradoc_159439.pdf) 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](https://www.apec.org/Meeting-Papers/Sectoral-Ministerial-Meetings/Trade/2021_MRT) 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.**

**WTO is necessary for good US-China relations, which solves a bunch of existential threats – Shaffer 21**

Shaffer, Gregory, “The US must engage with China — even when countering China”, June 21, 2021

<https://thehill.com/opinion/international/559049-the-us-must-engage-with-china-even-when-countering-china>

A policy statement heard around the world is that U.S. engagement with China “[has come to an end](https://www.bloomberg.com/news/articles/2021-05-26/biden-s-asia-czar-says-era-of-engagement-with-xi-s-china-is-over).” It suggests that the Biden administration is taking a hawkish approach toward China. That stance seemed clear as the U.S. worked the [G7 and NATO communiqués](https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/13/carbis-bay-g7-summit-communique/) to confront China with an “[alliance of democracies](https://www.allianceofdemocracies.org/initiatives/the-copenhagen-democracy-summit/the-summit-2021/).”

Yet, peeling the layers, one comes to the necessity for a much more complex U.S. approach to China. Rather than ending engagement, the U.S. should be thinking about engagement’s different dimensions. Indeed, [Kurt Campbell](https://thehill.com/person/kurt-campbell), coordinator for Indo-Pacific affairs on the National Security Council, who made the remark, implicitly addressed three necessary forms of engagement that have been lacking.

First, even when the United States aims to counter China, engagement remains essential. The U.S. will most effectively counter Chinese actions in the South China Sea, the Taiwan Strait, along the border with India, and against [allies’ economies](https://www.bbc.com/news/business-57004797), if the U.S. works closely with others. The Trump administration was notoriously unreliable and antagonistic towards allies. The United States and its allies will bolster their position in relation to China if they coordinate — an approach underscored at the recent G7 and [NATO](https://www.nytimes.com/2021/06/14/world/europe/biden-nato-china-russia.html) summits.

Yet, even in high-conflict situations, diplomacy and bargaining with China also will be important. Trade and technology policies are rife with rivalry and competition. These policies can trigger harmful tit-for-tat escalations if they are not [grounded in agreed rules and understandings](https://rodrik.typepad.com/dani_rodriks_weblog/2019/10/announcing-the-us-china-trade-policy-working-group.html). These risks become particularly salient when economic and financial crises strike. **Third-party institutions such as the World Trade Organization (WTO) can help parties manage their conflicts so that they are not mutually destructive. China will be indispensable in any U.S. effort to update and “reform”** [**WTO rules**](https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/GC/233.pdf&Open=True)**.**

**Second, the US United States needs to work with China to effectively address common global, existential challenges. Campbell mentioned three: climate change, global pandemics, and nuclear proliferation**. A signal success of the Obama administration was getting China to make commitments for the first time on emissions, which gave rise to the [Paris Agreement](https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement). The U.S. also worked with China to stem Iran’s ability to develop nuclear weapons under the [Joint Comprehensive Plan of Action](https://www.armscontrol.org/factsheets/JCPOA-at-a-glance). It needs to do the same regarding North Korea’s nuclear program.

Even in these areas of mutual concern, competition and rivalry are present. Yet such competition also can lead to mutually beneficial outcomes, such as to provide vaccines globally and to develop green technologies.

Third, Campbell stressed the critical importance of bipartisan engagement within the U.S. As politics in America degrades, the U.S. position against China weakens — and China knows this. The U.S. domestic inability to cooperate bolsters Chinese claims that the U.S. is declining and China is rising because China’s authoritarian model is superior to U.S. democracy. Unfortunately, bipartisan engagement to productively respond to China’s challenge — from the building of infrastructure, the support of science and education, and the defense of democracy — might be the most difficult to achieve. But it is critical.

### **Thus**

#### **Plan: Member nations of the WTO ought to grant a TRIPS waiver for novel pandemics**

### **Solvency**

**-the TRIPS waiver will be triggered by conditions modified from the Association for Professionals in Infection Control and Epidemiology:**

Association for Professionals in Infection Control and Epidemiology **(APIC 19)**. Center for Disease Control sub-branch.<https://apic.org/monthly_alerts/outbreaks-epidemics-and-pandemics-what-you-need-to-know/> January 2nd,2019

* The geographical area is world wide.
* It rapidly infects people at an elevated stage above epidemic
* is often caused by a new strain that has not circulated among people for a long time. Humans usually have little to no immunity against it. The illness spreads quickly from person-to-person worldwide.
* causes an elevated rate of death compared to a well known counterpart (IE. swine flu vs common flu)
* often creates social disruption, economic loss, and general hardship.

#### **Developing nations benefit from a TRIPS waiver—this is also our solvency advocate**

Nancy S. **Jecker &** Caesar A. **Atuire 21**. \*Department of Bioethics & Humanities, University of Washington School of Medicine, \*\*Department of Philosophy, University of Johannesburg, Auckland Park, Gauteng, South Africa, “What’s yours is ours: waiving intellectual property protections for COVID-19 vaccines,” Journal of Medical Ethics, July 6, 2021, <https://jme.bmj.com/content/medethics/early/2021/07/06/medethics-2021-107555.full.pdf>., AG, **DebateDrills.**

This view has come under increasing fire. Two competing positions have emerged. First, **India and South Africa petitioned the WTO for a temporary waiver of IP rights for medical products pertaining to preventing, containing or treating COVID19.2 The wavier would apply to all WTO members and lift restrictions in four TRIPS sections: copyright and related rights, industrial designs, patents and protection of undisclosed information. It would be annually reviewed and last for a set length, determined by the WTO Council. Proponents of the proposal argue that IP protections have ‘hindered urgent scale-up of vaccine production** and that ‘many countries—especially LMICs countries—may face institutional and legal difficulties when using TRIPS flexibilities’.12 To break the divide, WTO Director General, Okonjo-Iweala, proposed ‘a third way’ in which ‘we… license manufacturing to countries so that we can have adequate supplies while still making sure that IP issues are taken care of.’13 **This approach permits companies to retain ownership while licensing other companies to manufacture their vaccines**.

#### **The plan is also a prerequisite to starting the WHO technology transfer hub**

**WHO 4/21—**WHO, 4-21-2021, “Establishment of a COVID-19 mRNA vaccine technology transfer hub to scale up global manufacturing,” <https://www.who.int/news-room/articles-detail/establishment-of-a-covid-19-mrna-vaccine-technology-transfer-hub-to-scale-up-global-manufacturing>. (AG DebateDrills)

WHO and its partners are seeking to expand the capacity of low- and middle-income countries (LMICs) to produce COVID-19 vaccines and scale up manufacturing to increase global access to these critical tools to bring the pandemic under control.

**WHO will facilitate the establishment of one (or more, as appropriate) technology transfer hub(s) that will use a hub and spoke model (REF) to transfer a comprehensive technology package and provide appropriate training to interested manufacturers in LMICs. This initiative will initially prioritize the mRNA-vaccine technology2 but could expand to other technologies in the future.**

The intention is for these hubs to enable the establishment of production process at an industrial or semi-industrial level permitting training and provision of all necessary standard operating procedures for production and quality control. **It is essential that the technology used is either free of IP intellectual property constraints in LMICs, or that such rights are made available to the technology hub and the future recipients of the technology through non-exclusive licenses to produce, export and distribute the COVID-19 vaccine in LMICs, including through the COVAX facility**. Preference will be given to applicants who have already generated clinical data in humans, as such clinical data will contribute to accelerated approval of the vaccines in LMICs.

It is anticipated that WHO will work with funders and donors to mobilize financial support to establish the hubs and, as they are being established, to support the transfer of technology to selected manufacturers in LMICs, taking into consideration the need to establish permanent vaccine production capacity in regions where this is currently mostly absent. **This broader objective will ensure that all WHO regions will be able to produce vaccines as essential preparedness measures against future infectious threats**

#### **Other countries have capacity to produce millions of doses**

**Meldrum and Cheng 21**-- ANDREW MELDRUM and MARIA CHENG, AP News, “Vaccine technology transfer center to open in South Africa,” 6/21/2021, <https://apnews.com/article/united-nations-south-africa-africa-technology-coronavirus-vaccine-3cbdee395502802b55db2b5c81e6becd>. (AG, DebateDrills)

**Poor countries in Africa and elsewhere are facing dire shortages of COVID-19 jabs despite some countries having the ability to produce vaccines**, lamented Lara Dovifat, a campaign and advocacy adviser for Doctors Without Borders. “The faster companies share the know-how, the faster we can put an end to this pandemic,” she said in a statement. **Numerous factories in Canada, Bangladesh, Denmark and elsewhere have previously called for companies to immediately share their technology, saying their idle production lines could be churning out millions of doses if they weren’t hampered by IP intellectual property and other restrictions**. More than 1 billion coronavirus vaccines have been administered globally, but fewer than 1% have been in poor countries. South Africa accounts for nearly 40% of Africa’s total recorded COVID-19 infections and is currently suffering a rapid surge, but vaccine rollout has been slow, marked by delayed deliveries among other factors. **South Africa currently does not manufacture any COVID-19 vaccines from scratch, but its Aspen Pharmacare assembles the JJ Johnson & Johnson shot by blending large batches of the ingredients sent by J&J and then putting the product in vials and packaging them, a process known as fill and finish.** Earlier this month the company had to discard 2 million doses because they had ingredients produced in the U.S. in a factory under suspect conditions.

### **The plan sets a precedent to seamlessly shift to a direct support model during pandemics--that solves future pandemics but avoids the innovation DA.**

Brink **Lindsey 21**. Vice President, Niskanen Center; Writes for Brookings, “Why Intellectual Property and Pandemics Don’t Mix,” Brookings, June 3, 2021, <https://www.brookings.edu/blog/up-front/2021/06/03/why-intellectual-property-and-pandemics-dont-mix/>, RJP, **DebateDrills**.

**PUBLIC HEALTH EMERGENCIES AND DIRECT GOVERNMENT SUPPORT**

For pandemics and other public health emergencies, patents’ mix of costs and benefits is **misaligned** with what is needed for an effective policy response. The basic patent bargain, even when well struck, is to pay for more innovation down the road with **slower diffusion of innovation today**. In the **context of a pandemic**, that bargain is a bad one and should be rejected entirely. Here the imperative is to **accelerate** the diffusion of vaccines and other treatments, not slow it down. Giving drug companies the power to hold things up by blocking competitors and raising prices pushes in the completely wrong direction.

What approach to encouraging innovation should we take instead? How do we incentivize drug makers to undertake the hefty R&D costs to develop new vaccines without giving them exclusive rights over their production and sale? The most effective approach during a public health crisis is **direct government support**: public funding of R&D, advance purchase commitments by the government to buy large numbers of doses at set prices, and other, related payouts. And when we pay drug makers, we should not hesitate to pay generously, even extravagantly: we want to offer drug companies big profits so that they prioritize this work above everything else, and so that they are ready and eager to come to the rescue again the next time there’s a crisis.It was direct support via **Operation Warp Speed** that made possible the astonishingly rapid development of COVID-19 vaccines and then facilitated a relatively rapid rollout of vaccine distribution (relative, that is, to most of the rest of the world). And it’s worth noting that a major reason for the faster rollout here and in the United Kingdom compared to the European Union was the latter’s [misguided penny-pinching](https://www.nytimes.com/2021/05/17/opinion/europe-vaccines-commission.html?smid=tw-share). The EU bargained hard with firms to keep vaccine prices low, and as a result their citizens ended up in the back of the queue as various supply line kinks were being ironed out. This is particularly ironic since the Pfizer-BioNTech vaccine was developed in Germany. As this fact underscores, the chief advantage of direct support isn’t to “get tough” with drug firms and keep a lid on their profits. Instead, it is to accelerate the end of the public health emergency by making sure drug makers profit handsomely from doing the right thing.Patent law and direct support should be seen **not as either-or alternatives but as complements** that apply different incentives to different circumstances and time horizons. Patent law provides a decentralized system for encouraging innovation. The government doesn’t presume to tell the industry which new drugs are needed; it simply incentivizes the development of whatever new drugs that pharmaceutical firms can come up with by offering them a temporary monopoly. It is important to note that patent law’s incentives offer no commercial guarantees. Yes, you can block other competitors for a number of years, but that still doesn’t ensure enough consumer demand for the new product to make it profitable. **DIRECT SUPPORT MAKES PATENTS REDUNDANT** The situation is different in a pandemic. Here the government knows exactly what it wants to incentivize: the creation of vaccines to prevent the spread of a specific virus and other drugs to treat that virus. Under these circumstances, the decentralized approach isn’t good enough. There is no time to sit back and let drug makers **take the initiative** on their own timeline. Instead, the government needs to be more involved to incentivize specific innovations now. As recompense for letting it call the shots (pardon the pun), the government sweetens the deal for drug companies by insulating them from commercial risk. If pharmaceutical firms develop effective vaccines and therapies, the government will buy large, predetermined quantities at prices set high enough to guarantee a healthy return. For the pharmaceutical industry, it is useful to conceive of patent law as the default regime for innovation promotion. It improves pharmaceutical companies’ incentives to develop new drugs while leaving them free to decide which new drugs to pursue – and also leaving them to bear all commercial risk. In a pandemic or other emergency, however, it is appropriate to **shift to the direct support regime**, in which the government focuses efforts on one disease. In this regime, it is important to note, the government provides qualitatively superior incentives to those offered under patent law. Not only does it offer public funding to cover the up-front costs of drug development, but it also provides advance purchase commitments that guarantee a healthy return. It should therefore be clear that the pharmaceutical industry has **no legitimate basis for objecting to a TRIPS waiver**. Since, because of the public health crisis, drug makers now qualify for the superior benefits of direct government support, they no longer need the default benefits of patent support. Arguments that a TRIPS waiver would deprive drug makers of the incentives they need to keep developing new drugs, when they are presently receiving the most favorable incentives available, can be **dismissed as the worst sort of special pleading.** That said, it is a serious mistake to try to cast the current crisis as a morality play in which drug makers wear the black hats and the choice at hand is between private profits and public health. We would have no chance of beating this virus without the formidable organizational capabilities of the pharmaceutical industry, and providing the appropriate incentives is essential to ensure that the industry plays its necessary and vital role. It is misguided to lament that private companies are profiting in the current crisis: those profits are a drop in the bucket compared to the staggering cost of this pandemic in lives and economic damage. What matters isn’t the existence or size of the profits, but how they are earned. We have good reason to want drug makers to profit from vaccinating the world: the comparative price is minuscule, and the incentive effects are a vital safeguard of public health in the event of future crises. What we want to avoid at all costs is putting drug makers in the position where drug companies can profit from standing in the way of rapid global vaccination. That is why intellectual property rights need to be taken out of the equation. Vaccinating the world in any kind of reasonable time frame will require large-scale technology transfer to drug firms in other countries and rapid expansion of their production capacity. And looking beyond the current pandemic to the longer term, we need [ample, redundant global vaccine production capacity](https://www.vox.com/future-perfect/22397914/vaccine-mrna-adenovirus-manufacturing-process-investment) that is widely distributed around the planet. To achieve these goals as rapidly as possible will require the active cooperation of the U.S. pharmaceutical industry, which is why the direct support model now needs to be extended. What is needed now is an Operation Warp Speed for the world, in which we make it worth current vaccine producers’ while to share their know-how broadly and ramp up global capacity. Here again, we must recognize that the choice isn’t between people on the one hand and profits on the other. Rather, the key to good pandemic response policy is ensuring that **incentives are structured** so that drug company profit-seeking and global public health are well aligned. That means opting out of the default, decentralized patent bargain in favor of generous but well-focused direct government support.

## **Framing**

#### **Pleasure and pain are intrinsically valueable and disvalueable – everything else regresses. Evolutionary knowledge is reliable – broad consensus and robust neuroscience prove.**

**Blum et al. 18**

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**Pleasure** is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10]. Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14]. Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain’s pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals. Evolutionary theories of pleasure: The love connection BO:D Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us “what we are,” i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it. It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring. Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding. There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the “Brain Reward Cascade” (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall health. Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage. Finding happiness is different between apes and humans As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure. Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even **produce the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered. Desire and reward centers It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called “REWARD” involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation. In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the “Feel Good” response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term “Reward Deficiency Syndrome” (RDS) to describe genetic and epigenetic induced hypodopaminergia in the “Brain Reward Cascade” that contribute to addiction and compulsive behaviors [3,6,41]. Furthermore, ordinary “liking” of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for “sweet”; and in Greek, hodone is the term for “pleasure.” Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42]. Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans. In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: “liking,” “learning,” and “wanting” [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or “wanting” hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45]. Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic “high” that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between “stages,” and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations. Over many years the controversy of dopamine involvement in especially “pleasure” has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50] In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders. In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: “Humans have evolved a dopamine system that is different than the one in chimpanzees.” This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: “It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction).” Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain’s reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson’s, schizophrenia and spectrum disorders such as autism and addiction or RDS. Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans’ ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual’s physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

#### **Thus, the standard is maximizing expected well-being or act hedonistic util. Prefer additionally –**

#### **1] Outweighs – A] Predictability – most authors assume util when discussing the cost/benefit tradeoffs of policy B] topic ed – other frameworks don’t engage with key questions of implemented policy impacts – that’s key, b/c we only have 2 months for this topic. C] TJFs first because they assume the framework being good for debate**

#### **2] Death is bad and outweighs – a) agents can’t act if they fear for their bodily security which constrains every ethical theory, b) it destroys the subject itself – kills any ability to achieve value in ethics since life is a prerequisite which means it’s a side constraint since we can’t reach the end goal of ethics without life c) the loss of all future genertaiosn would be trillions of lives o/w on magnitude**

#### **3] Actor spec—governments must use util because they don’t have intentions and are constantly dealing with tradeoffs—outweighs since different agents have different obligations—takes out calc indicts since they are empirically denied.**