### AC – Inequality

#### The Advantage is Inequality

#### The status quo ensures vaccine imperialism. Intellectual property law is the lynchpin of North-South health inequality and has empirically resulted in disparate life outcomes.

Vanni 21 – Dr. Amaka Vanni is Lecturer in Law at the University of Leeds. ("On Intellectual Property Rights, Access to Medicines and Vaccine Imperialism," 3-23-2021, <https://twailr.com/on-intellectual-property-rights-access-to-medicines-and-vaccine-imperialism/>) julian

While the response to COVID-19 has shown what can be accomplished when the world works together, it has also underscored three interrelated points. First, the neoliberal framework – including the critical role intellectual property (IP) law plays in constituting this form of civilisation – is an unsuitable model for delivering the goods needed to respond to global health emergencies. The current economic/market system does not allow for equitable responses to infectious diseases, particularly access to sufficient medical and health resources. This inequity was obvious in the early days of the pandemic when test kits, PPEs, and ventilation machines were being distributed on the basis of who could pay the most rather than who needed them the most. Second, the beggar-thy-neighbor response currently adopted by developed countries hurts everyone because failing to stop the spread of the virus globally allows more mutations, which makes existing vaccines less effective. As COVID-19 has shown, no one is safe until everyone is safe. Yet, despite this warning, the hoarding of vaccines by developed countries continues unabated and speaks to the wider racist capitalist system we live in. If anything, this crude accumulation of vaccines reinforces North-South economic and political dominance and marks, as Onur Ince observes, the conceptual locus of political violence operative in the global genealogy of capitalism.

Third, while COVID-19 may endanger us all, it is far more costly to some than others. Numerous reports have shown how black and brown people are most impacted by the pandemic. In the United States, for example, indigenous Americans have the highest COVID-19 mortality rates nationwide while African American communities have COVID-19 mortality that is 2.3 times higher than the rate for Asians and Latinxs, and 2.6 times higher than the rate for Whites. Similar data is also emerging in the UK where people from black and minority ethnic groups are at greater risk of dying from coronavirus. This means those groups suffer higher loss of life compared to other racial groups due to inequities in healthcare access as well as higher rate of pre-existing conditions. In other parts of the world, the most vulnerable and the economically marginalized such as those working in the informal sector and living in shanty towns are feeling the effects of the pandemic the most. In Latin America and the Caribbean, 70 per cent of domestic workers have been affected by the pandemic where most have stopped receiving income. In Ghana, residents of slums at Old Fadama – a suburb in Accra – were made homeless when the government demolished their homes. The ensuing homelessness means there is little to no space of observing social distancing rules, access to running water and access to other resources to practice basic hygiene. Meanwhile in India, the pandemic has unsurprisingly hit the country along caste lines where the Dalits are most impacted because many are poor and have limited access to healthcare.

As Kimberlé Williams Crenshaw reminds us, the high number of minority deaths is not new. Rather, this crisis simply amplified racism and other forms of structural inequality as a pre-existing condition – an intersectional issue – where those disproportionately hurt are those who are already structurally marginalized. Thus, while recognising a broken global IP regime that triggered the scramble for vaccines, the racialized impact of the pandemic cannot be ignored, and it points to the entangled roots of race and capitalism.

The rest of this analysis takes a close look at some of the legal, political and economic forces that have animated IP rights and access to COVID-19 vaccine. It will focus on how the entanglement of corporate capture of global IP regime, state complicity and vaccine imperialism have come together to shape public health responses to the pandemic. It underscores how the law, in this case international IP law, consistently shelters capital and operates as an expression to further corporate pharmaceutical interests. If there is a lesson to be gleaned from this pandemic, it is that intellectual property is not failing us but is functioning the way it is set up to do. As the history of IP globalization has shown, the World Trade Organization’s (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) is a transplant of the Euro-American model of property, driven by multinational corporations who used their respective national governments to underwrite and export their domestic IP claims. Therefore, it is unsurprising that this international legal regime employed to advance the interests of particular classes, nations and regions at the expense of others continues to reproduce extreme inequality with human costs.

#### The TRIPS IP regime is at the heart of that imbalance. It creates a privileged class with access to medicine and locks in data exclusivity and evergreening practices that delay the entrance of generic medicines into the market, which would decrease prices.

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Intellectual property rights (IPRs) are time-limited legal rights granted to inventors and creators. IPRs include copyrights, trademarks, patents, trade secrets, and geographical indications, while protected subject-matters include, but are not limited to, brands, inventions, designs, and biological materials. Importantly, IPRs overlap as a product may be covered by a series of rights. For example, a pharmaceutical medicine, defined by Britannica as a ‘substance used in the diagnosis, treatment, or prevention of disease’, is protected by patents, trademarks, and trade secrets. **Patents are the most common form of IPR used** for the protection of innovation in pharmaceuticals. Patents grant inventors limited market exclusivity for their inventions, and, in exchange, the inventor must disclose sufficient information such that competitors will be able to step into the market. This disclosure allows a competitor to make preparation to enter the market at the end of the monopoly period. Due to this legally-mandated exclusivity, patent owners – usually multinational corporations – have the right to prevent others from making, using, or selling a patented invention. The TRIPS Agreement, concluded as part of the Uruguay Round of multilateral trade negotiation and in force since 1995, provides a minimum of 20 years patent protection. The belief is that the duration allows corporations to recoup the expenses of developing, testing and upscaling an innovative pharmaceutical product.

From the onset, the TRIPS IP regime created imbalance between innovation, market monopoly, and medicines access, because it failed to take into consideration the health burden, development needs and local conditions of the various countries that make up the WTO. This has led to several issues. First, the market monopoly of IP rights, which allows the corporation to set the market for drugs, has created a privileged societal class with access to lifesaving medication distinguishing them from those excluded from access to available medications. This phenomenon is vividly illustrated in the HIV/AIDS crisis of the 1990s and early 2000s. While HIV/AIDS patients in developed countries were able to afford antiretroviral (ARVs) treatments, which had been developed, approved and patented as early as 1987, many patients in Africa and other parts of the developing world could not afford the approximately USD 12,000 per annum treatment at that time. By 2001, approximately 2.4 million people in the region had died of AIDS. The South African government intervened to reduce the cost of ARVs by amending its domestic patent laws to allow the authorization of parallel imports of patented pharmaceuticals and to encourage the use of generic drugs, but it was sued by the US industry group Pharmaceutical Research and Manufacturers of America (PhRMA). Though the lawsuit was eventually dropped, it highlights the measures pharmaceutical corporations, backed by some national governments, are willing to take to protect their profits at the cost of human lives. Significantly, we see how law (or the threat of legal action) is used not only to protect and expand the profitability of a certain kind of property but, as Anjali Vats and Deidré Keller have taught us, also reveals IP law’s racial investments in whiteness and its continuing implications for racial (in)equality, particularly in the way it informs systems of ownership, circulation, and distribution of knowledge. Similarly, Natsu Saito takes up the analysis of IP, race and capitalism by theorizing some of the ways in which ‘value’ in IP law concentrated in the hands of large corporations is calculated in terms of its profitability rather than what it contributes to the well-being of society. However, the proverbial chickens have come home to roost as even rich countries are beginning to feel the bite of the dysfunctional IP system.

The issue of excessive pricing for medicines is a growing problem in developed countries as well and has now become the single biggest category of healthcare spending in these states, particularly the US. An empirical report by I-MAK reveals how excessive pharmaceutical patenting is extending monopolies and driving up drug prices. The report, for example, notes that over half of the top twelve drugs in the US have more than 100 attempted patents per drug. Specifically, the report revealed that Humira® by AbbVie (used in the treatment of Crohn’s disease and the US’s highest grossing drug) has been issued 130 patents. The drug costs USD 44,000 annually and generated more than USD 19.2 billion for the company in 2019 alone. The Report also notes that the first patent filed for Herceptin® – used in the treatment for certain breast and stomach cancers – was in 1985 but currently has pending patent applications that could extend its market monopoly for 48 more years. Meanwhile, Celgene has over 105 patents for its oral cancer drug Revlimid® (used in the treatment of multiple myeloma) extending its monopoly until the end of 2036 – a patent lifespan of 40 years. In addition to excessive patenting and pricing, we have also come to understand the power of data in this context.

Second, regulatory agencies worldwide require drugs to undergo safety and efficacy testing to ensure they are harmless before approval. These tests, known as clinical trials, involve human subjects and are costly because they can run up to three separate phases. The data collected during these clinical trials are the proprietary materials of the company conducting the tests. Because it is expensive and time-consuming, generic drug companies usually rely on the safety and efficacy data of brand name companies to seek regulatory approval as long as they can prove their generic version is chemically and biologically equivalent to the original. Relying on the test data of brand name companies reduces the production cost for generic medicines and allows for quicker market entry. However, recent years have seen a promotion of time-limited, legally mandated protection against the non-proprietary use of such data by generic companies. This is known as data exclusivity. Put differently, data exclusivity is a period when a generic company cannot use the clinical trial data of an innovator pharmaceutical company to receive regulatory approval for a generic medicine. In so doing, data exclusivity provides a layer of protection in addition to patent protection to further delay market entry of generic medicines.

Data exclusivity periods vary depending on the jurisdiction. For example, it is twelve years in US and ten years in the EU. While the TRIPS Agreement does not create property rights over registration data, the US and the EU have continued to champion and export data exclusivity through free trade agreements, particularly for biologics. For example, the US Affordable Health Care for America Act in 2009 extended a 12-year exclusivity period for biologics. This US interpretation for registration data was also included in the United States-Mexico-Canada Agreement (USMCA), which sought a 10-year data exclusivity for new biologics. However, after intense negotiations, the data exclusivity protection was reduced to 5 years for new pharmaceuticals. In this instance, we see a crystallising of Euro-American ideas of property and a willingness to promote those property interests through the law, both domestic and international. In fact, certain scholars assert that this pursuit of higher TRIPS standards is driven, in part, by the US desire to achieve levels of protection it anticipated from the TRIPS Agreement but failed to secure. Given the influence of the industry and its representative group, PhRMA, in seeking stronger protection on a global scale, it is not surprising that the US’s post-TRIPS policies continue to rachet up standards in ways that undermine access to affordable medicines, and perpetuate social hierarchy and subordination.

Third, patent practices in recent decades have seen pharmaceutical companies engaging in trivial and cosmetic tweaking of a drug whilst still reaping the benefit of 20 years of patent protection. This tweaking sometimes involves making minor changes to patented drugs, such as changes in mode of administration, new dosages, extended release, or change in color of the drug. These changes normally do not offer any significant therapeutic advantage even though pharmaceutical companies argue they provide improved health outcomes to patients. These additional patents on small changes to existing drugs, known as evergreening or patent thickets, block the early entry of competitive, generic medicines that drive medicine prices down. For example, while not mandated by TRIPS, many US led TRIPS-plus free trade agreements have expanded the scope for evergreening. These include the US-Jordan FTA (2000), US-Australia FTA (2004) as well as the US-Korea FTA (2007), which allow for the patenting of new forms, uses, or methods of using existing products.

The cancer drug Gleevec®, owned by Novartis, is another example of how pharmaceutical companies often secure patents on new, more convenient versions with marginal therapeutic benefit to patients whilst blocking the entry of generic medicines. In 2013, Novartis’ patent application for Gleevec®– the β crystalline form of the salt imatinib mesylate – was rejected by the Indian Supreme Court because it lacked novelty. However, the company has secured patents for this product in other jurisdictions such as the US and has maintained a high price of Gleevec there. But in India the price of Gleevec® was reduced from approximately USD 2,200 to USD 88 for one month’s treatment in the generic drugs market as a result of the 2013 Indian Supreme Court judgement. Novartis is not the only culprit. The depression drug Effexor® by Pfizer was granted an evergreen patent when the company introduced an extended-release version, Efexor-XR®, even though there was no additional benefit to patients. Eventually, the patent was declared invalid, but by then it had already cost an estimated USD 209 million to Australian taxpayers and kept generic competition off the market for two and a half years. In another instance, Pfizer went on to secure an additional patent for the Pristiq®, which contained identical chemical compound as Efexor-XR®,and again with no added therapeutic benefit.

These evergreening practices, of course, have material effects. Apart from delaying the entry of generic versions, they give brand-name pharmaceutical companies free reign in the market, which allows them to set the market price. Recent years have seen monopoly prices rise exorbitantly causing significant financial strain to patients, domestic healthcare services and even insurance companies in developed countries. A notorious example is Martin Shkreli, who in 2015 bought the rights to an anti-malarial drug, then raised the price by 5,000 per cent from a cost of USD 13.50 to USD 750. Similarly, a white paper by I-MAK shows how excessive patenting and related strategies are driving families to overspend on lifesaving medicines. Celgene, the makers of Revlimid® raised the price of the drug by more than 50 per cent since 2012 to over USD 125,000 per year of treatment. Using the example of Solvadi® by Gilead, which costs USD 84,000 per treatment, Feldman notes the drug would cost the US Department of Defense more than USD 12 billion to treat all hepatitis-infected patients in US Veterans Affairs. But the US is not alone. In Europe, expensive drugs have prompted a growing backlash against pharmaceutical corporations. Reacting to these price hikes, Dutch pharmacies are bypassing these exorbitant prices by preparing medicines in-house for individual patients. The broken IP system ranging from an extraordinarily low standard for granting patents to permissions of patent thickets around a single molecule has not only severely distorted the system of innovation, but they have also skewed access to life-saving drugs. As a result, prices for new and existing medicines are constantly rising, making essential medicines inaccessible for millions of people around the world.

#### Vaccine imperialism inevitably commodifies medicine and results in vaccine nationalism that magnifies North-South health disparities.

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The development and dissemination of COVID-19 vaccines has highlighted how the international legal system pertaining to global health is driving global health inequalities instead of alleviating them. As a result, in part, of neocolonial ‘development’ models that promote inequitable IP laws, most of the vaccine supply has been manufactured in the Global North and purchased by governments in those countries to be stockpiled for their own populations—a practice sometimes described as ‘vaccine hoarding’ or ‘vaccine nationalism’.19 20

Even where countries in the Global South have produced vaccines themselves in significant quantities, they have sometimes been guilty of perpetuating inequity of other Global South countries through vaccine nationalism and vaccine diplomacy, in which vaccines are offered to poorer countries in order to achieve geopolitical objectives.21 22 A decolonised approach to global health enables us to conceptualise this behaviour as a reproduction of a neocolonial system which pits some formerly colonised countries against others.23 24 This has meant that some countries in the Global South also benefit from this uneven system, and they too contribute to the exploitation of poorer countries in the Global South.21

Although the WHO cocreated the COVAX Facility, a donor-funded mechanism that seeks to pool procurement to enhance access to vaccines for LMICs, the charitable funding scheme is facing a serious shortfall in meeting global needs. The WHO has estimated that most people in LMICs will not be vaccinated until the end of 2023,25 and even this estimate may be optimistic, given the delays in initial distributions through COVAX.26

This prompts the obvious question: How is it that existing legal mechanisms, or at least the prevailing interpretations and understandings of them, have permitted and even enabled this inequity? International IP law embedded in international trade agreements allows pharmaceutical companies time-limited rights to prevent others from making, using or selling their patented invention without permission. Under the 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which was included in the Uruguay Round of multilateral trade negotiation, pharmaceutical companies have at least 20 years from filing a patent to profit from their investments in developing, testing and upscaling pharmaceutical products throughout the world.27 This protection is given to pharmaceutical companies to incentivise them to engage in greater research and development for new drugs. However, there is evidence that challenges previous assumptions about the linkages between Research and Development spending and innovation for essential medicines.28 The current COVID-19 crisis has brought this into sharp focus, with projections that the global public sector had spent at least €93 billion on the development of COVID-19 vaccines and therapeutics—€85.6 billion of this on vaccines.29

Global IP rights, whether adopted in accordance with TRIPS, or subsequent bilateral and multilateral agreements, are part of a wider legal system which facilitates global neocolonialism. For instance, powerful actors such as the European Union (EU) and the USA have included TRIPS-plus provisions in bilateral and multilateral agreements. These agreements often force countries of the Global South to concede to more stringent patent protections in order to gain trade advantages and also to escape trade sanctions.30

In so doing, IP law commodifies medicines that are essential to human survival and well-being, and sacrifices the lives and health of the poor and otherwise marginalised on the altar of corporate profitability.31 Common interpretations and understandings of the international IP system are that healthcare goods and services derive their value from their tradability.14 (‘We use the term “public good” as it is used in global health to mean a good that should be available universally because of its critical importance to health, and not as the term is used in economics to mean a good that is both non-excludable and non-rivalrous.’)14 32 However, many, including critical Global South scholars, have questioned the prioritisation of property rights (including IP rights) over other rights (especially the rights to health, life and equal benefit from scientific progress) in a manner that is inconsistent with international human rights law.31

Many low-income countries have long been active in resisting the IP system as an unjust extension of a colonial trade system. At the height of the HIV pandemic, in which millions of people in the Global South were denied lifesaving medicines, civil society treatment access campaigns galvanised states within the World Trade Organization (WTO) into agreeing to the Doha Declaration on TRIPS and Public Health.33 This WTO Declaration recognises human rights and allows states to use all of the ‘flexibilities’ within the TRIPS regime to protect public health, acknowledging the need for access to medicines in a public health emergency.34 However, this international consensus on IP has always been strongly contested by pharmaceutical companies and their host governments, predominantly in the Global North.

This remarkably strong resistance to employing TRIPS flexibilities has continued in the current COVID-19 crisis, as the attempts of countries largely from the Global South to try to obtain a TRIPS waiver to increase their supply of vaccines for COVID-19 have been unsuccessful. Although the USA has recently supported a watered-down version of a TRIPS waiver, it remains far from certain whether other states in the Global North will support this prioritisation of health over IP rights, or whether this would be sufficient, as we discuss in the section on flexibilities below.

Rather than allowing for equitable vaccine access as a human right for all people everywhere, states have instead turned to a charitable donation and market purchase scheme through the COVAX initiative. This type of model, which focuses on charity and not rights, is consistent with exactly the kind of understandings of human rights and public health that are in need of decolonisation. While there have been public consensus statements issued by the Human Rights Council, in which states have agreed that all states have the right to access vaccines and the right to use TRIPS flexibilities, this statement reflects a disappointing failure to acknowledge any corresponding state obligations to employ such flexibilities.35 This has allowed countries from the Global North, and their few Global South allies, to agree to this statement and support the right to vaccine access rhetorically, and in principle within the Human Rights Council, while resisting any calls for a TRIPS waiver within the WTO, and thus consolidating a denial of their obligations to employ TRIPS flexibilities.

#### Status quo distribution results in disparities between nations. That results in colonial hierarchies of health.

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The current global distribution of COVID-19 vaccines is largely dictated by power disparities and inequities in financial and other resources, with predominantly high-income countries contracting bilaterally with individual pharmaceutical companies (many in their own countries) for specific vaccines, leaving countries from the Global South facing inequitable vaccine access. Bilateral deals between states and pharmaceutical companies, whether completed by Global North or Global South states, significantly compromise the effectiveness and equity of the COVAX initiative, limited as it already is by the coercive influence, vested interests and participation of pharmaceutical companies and their host nations. The African Union, for example, endorsed the TRIPS waiver to relax WTO rules so that LMICs could create their own COVID-19 vaccines, but this collective effort across African countries faced resistance from Global North countries and pharmaceutical companies.

The IP system appears to have pushed countries in the Global South that may prefer not to be dependent on the charitable model of the COVAX scheme to join high-income countries in engaging directly with manufacturers to purchase COVID-19 vaccines. This has included African countries, despite the African Union’s criticism of the inequities resulting from IP law protections. This process has reproduced colonially entrenched power dynamics, in which poorer countries lack the bargaining power to obtain competitive rates and, consequently, typically end up paying far more than the wealthier, developed countries. More broadly, countries in the Global South are pressured into participating in global systems of trade that result in the exploitation of their own populations by unjust global economic systems and IP laws.39 The high cost of vaccines for countries from the Global South constitutes a large proportion of their health expenditure, and this comes at the expense of other health priorities.

In many cases, the only way in which Global South countries can purchase vaccines is to move themselves further into debt. Given the detrimental neocolonial implications of debt, with a long history of loan conditionalities through structural adjustment programmes, increasing debt to service health needs contributes to the worsening of inequalities between the Global North and Global South.40 These programmes may increase debt and undermine development in ways that limit the realisation of the right to health.41 The World Bank has set aside US$12 billion and has already disbursed loans of US$500 million for vaccines in low-income and middle-income nations;42 poorer nations, instead of servicing already depleted health systems, are forced to divert additional funds to servicing debt.

#### It also results in inequalities within nations. Politicians create a hierarchy of access, which feeds racism, classism, and corruption.

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The high costs of vaccines also propagate inequalities within nations, as desperate countries try to recoup some of the costs by charging their people for vaccine access or using complex arrangements that prioritise some people over others. Egypt, for instance, is charging for the COVID-19 vaccine, which is likely to exclude the poorest people, who have already been severely affected by the crisis.43 In reality, it also means that wealthier individuals are prioritised, as they usually find it easier to pay for access. Those able to access vaccines in these countries, very often a small economic and political elite, are often in positions of power precisely along the lines of existing global inequalities and often to the prejudice of groups marginalised on the basis of gender, race and other grounds of discrimination prohibited under international human rights law.

Facilitating vaccine access for more affluent members of society reinforces power structures at the expense of marginalised populations. In South Africa, conservative non-governmental organisations aligned closely with the interests of the white minority and elite corporate interests launched a court challenge in order to procure private supplies of vaccines, bypassing the nationwide mechanisms set up by the government to ensure equitable vaccine access. However, having faced opposition from human rights activists and the South African government, this litigation was ultimately withdrawn. (For more information on this litigation see ref 44 45.) Kenya has also prioritised diplomats for COVID-19 vaccination at the expense of health workers, and Indonesia has suggested that the ‘more productive’ members of society be vaccinated first.46 47 In other countries, such as Peru, political elites and their families and friends were secretly vaccinated before the broader populations. (See as examples ref 48 49.)

An important issue at the boundary of national and international concerns is the potential use of ‘vaccine passports’.50 Free movement of goods is integral to one of the core objectives of the IHR, and yet many governments are proposing the use of COVID-19 vaccination passports as a mechanism for reopening their economies, which would discriminate against those who have not been vaccinated. The EU introduced vaccine passports in the summer of 2021 for entry into the eurozone and excluded vaccines that were made from the Serum Institute in India which is responsible for the majority of vaccines provided in the Global South.51 Vaccination disparities both within and between countries mean that many people in LMICs are unlikely to be vaccinated until 2023; therefore, vaccine passports would only further exacerbate both national and global inequalities and disproportionately restrict the rights of large swathes of the global population from exercising their right to freedom of movement on an equal basis.

#### This means COVID and future pandemics will reproduce untenable working conditions and racialized and classed life outcomes.

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The COVID-19 pandemic has revealed the lethal consequences of the sharp rise in economic inequality, the concentration of wealth in fewer and fewer hands and the increasing precarity of labour. For example, as COVID-19 slammed Manhattan, members of the top 1% flocked to their beach retreats in the Hamptons to ride out the contagion (Sellinger 2020). Meanwhile, ‘essential workers’ at the bottom of the contemporary economic hierarchy had no options but to continue to show up for work and face exposure to the deadly virus. First responders, bus drivers, nursing home workers, janitors, postal workers, grocery stockers, agricultural workers, Wal-Mart employees, Amazon warehouse workers, delivery drivers, and meat packers—many earning minimum wage and most without employer-subsidized health insurance or other benefits—had to keep working. As Bertha Bradley, a food service worker in North Carolina stated, ‘I don’t get health benefits, I don’t get sick time, I don’t get paid vacations, I don’t get a living wage’ (Jaffe and Chen 2020: 126). Katie Pine and Kate Henne refer to them as ‘new risk workers’, many of whom are given mandates for minimizing risk but few resources to implement them (Pine and Henne 2020). For example, in the John H. Stroger Hospital in Chicago, nurses were being told to reuse N95 masks, ‘sometimes up to forty-five days’ (Jaffe and Chen 2020: 138). By contrast, knowledge workers could work from the safety of their own homes and reduce their risks of becoming infected.

COVID-19 has disproportionately attacked communities of colour, compounding economic inequality and systemic racism. It is clear that ‘race matters for the way that markets have been built historically and function today’ (McNamara and Newman 2020: 6). As Presidential candidate Joe Biden pointed out during the presidential debate in September 2020, 1 out of every one-thousand African Americans in the US has died from COVID-19. In Chicago about 70% of the COVID deaths were African Americans (Jaffe and Chen 2020: 140). The UN Secretary-General António Guterres pointed out that COVID-19 ‘is exposing fallacies and falsehoods everywhere … the delusion that we live in a post-racist world, the myth that we are all in the same boat’ (Guterres 2020). In September, Citigroup released a report that systemic racism, discrimination against African Americans, has cost the economy $16 trillion (Akala 2020).

Many of the precariat are people of colour, recent immigrants and undocumented workers. By May 2020 slaughterhouses around the world became virus hot spots and exposed multiple layers of dysfunction. The meat processing industry is highly consolidated, dominated by global multinational corporations including Cargill, JBS, Smithfield and Tyson. Since the 1980s this industry has pursued the financialized model of consolidation and vertical integration, ‘aimed at increasing profits through efficiency and low wages’ (van der Zee et al. 2020). Many migrant workers in these plants live in communal housing; crowded working conditions, large plants and cramped housing, and lack of paid sick leave all exacerbate the spread of coronavirus in these environments. Indeed, Tyson was even offering workers $500 bonuses to keep working in the midst of plant outbreaks (van der Zee et al. 2020). Workers are shouldering all of the risk as slaughterhouse companies get the rewards. Structures of the global economy, including financialization and monopoly capitalism have amplified the dangers of the pandemic and pushed people further ‘into unequal groups that are not only divided by money but by matters of life and death’ (McNamara and Newman 2020: 11; Sell and Williams 2019).

#### The plan reverse casually ensures the reduction of vaccine imperialism.

Vanni 21 – Dr. Amaka Vanni is Lecturer in Law at the University of Leeds. ("On Intellectual Property Rights, Access to Medicines and Vaccine Imperialism," 3-23-2021, <https://twailr.com/on-intellectual-property-rights-access-to-medicines-and-vaccine-imperialism/>) julian

Despite calls to make COVID-19 vaccines and related technologies a global public good, western pharmaceutical companies have declined to loosen or temporarily suspend IP protections and transfer technology to generic manufacturers. Such transfer would enable the scale-up of production and supply of lifesaving COVID-19 medical tools across the world. Furthermore, these countries are also blocking the TRIPS waiver proposal put forward by South Africa and India at the WTO despite being supported by 57 mostly developing countries. The waiver proposal seeks to temporarily postpone certain provisions of the TRIPS Agreement for treating, containing and preventing the coronavirus, but only until widespread vaccination and immunity are achieved. This means that countries will not be required to provide any form of IP protection on all COVID-19 related therapeutics, diagnostics and other technologies for the duration of the pandemic. It is important to reiterate the waiver proposal is time-limited and is different from TRIPS flexibilities, which are safeguards within the Agreement to mitigate the negative impact of patents such as high price of patented medicines. These safeguards include compulsory licenses and parallel importation. However, because of the onerous process of initiating these flexibilities as well as the threat of possible trade penalties by the US through the United States Trade Representative (USTR) “Special 301” Report targeting countries even in the absence of illegality, many developing countries are reluctant to invoke TRIPS flexibilities for public health purposes. For example, in the past, countries such as Colombia, India, Thailand and recently Malaysia have all featured in the Special 301 Report for using compulsory licenses to increase access to cancer medications. It is these challenges that the TRIPS waiver seeks to alleviate and, if approved, would also provide countries the space, without fear of retaliation from developed countries, to collaborate with competent developers in the R&D, manufacturing, scaling-up, and supply of COVID-19 tools. However, because this waiver is being opposed by a group of developed countries, we are grappling with the problem of artificially-created vaccine scarcity. The effect of this scarcity will further prolong and deepen the financial impact of this pandemic currently estimated to cost USD 9.2 trillion, half of which will be borne by advanced economies. Thus, in opposing the TRIPS waiver with the hopes of reaping huge financial rewards, developed countries are worsening pandemic woes in the long term.

Another kind of scarcity caused by vaccine nationalism has also reduced equitable access. Vaccine nationalism is a phenomenon where rich countries buy up global supply of vaccines through advance purchase agreements (APA) with pharmaceutical companies for their own populations at the expense of other countries. But perhaps it is time to reorient our sight and call the ongoing practices of buying up global supply of vaccine what it truly is – vaccine imperialism. If we take seriously the argument put forward by Antony Anghie on the colonial origins of international law, particularly how these origins create a set of structures that continually repeat themselves at various stages, we will begin to see COVID-19 vaccine accumulation not only as political, but also as imperial continuities manifesting in the present. Take, for instance, the report released by the Duke Global Health Innovation Center that shows that high-income countries have already purchased nearly 3.8 billion COVID-19 vaccine doses. Specifically, the United States has secured 400 million doses of the Pfizer-BioNTech and Moderna vaccines, and has APAs for more than 1 billion doses from four other companies yet to secure US regulatory approval. The European Union has similarly negotiated nearly 2.3 billion doses under contract and is negotiating for about 300 million more. With these purchases, these countries will be able to vaccinate their populations twice over, while many developing states, especially in Africa, are left behind. In hoarding vaccines whilst protecting the IP interests of their pharmaceutical multinational corporations, the afterlife of imperialism is playing out in this pandemic.

Moreover, these bilateral deals are hampering initiatives such as the COVID-19 Vaccine Global Access Facility (COVAX) – a pooled procurement mechanism for COVID-19 vaccine – aimed at equitable and science-led global vaccine distribution. By engaging in bilateral deals, wealthy countries impede the possibility of effective mass-inoculation campaigns. While the usefulness of the COVAX initiative cannot be denied, it is not enough. It will cover only the most vulnerable 20 per cent of a country’s population, it is severely underfunded and there are lingering questions regarding the contractual obligations of pharmaceutical companies involved in the initiative. For instance, it is not clear whether the COVAX contract includes IP-related clauses such as sharing of technological know-how. Still, even with all its faults, without a global ramping-up of production, distribution and vaccination campaigns via COVAX, the world will not be able to combat the COVID-19 pandemic and its growing variants. Health inequity and inequalities in vaccine access are not unfortunate outcomes of the global IP regime; they are part of its central architecture. The system is functioning exactly as it is set up to do.

These events – the corporate capture of the global pharmaceutical IP regime, state complicity and vaccine imperialism – are not new. Recall Article 7 of TRIPS, which states that the objective of the Agreement is the ‘protection and enforcement of intellectual property rights [to] contribute to the promotion of technological innovation and to the transfer and dissemination of technology’. In similar vein, Article 66(2) of TRIPS further calls on developed countries to ‘provide incentives to enterprises and institutions within their territories to promote and encourage technology transfer to least-developed country’. While the language of ‘transfer of technology’ might seem beneficial or benign, in actuality it is not. As I discussed in my book, and as Carmen Gonzalez has also shown, when development objectives are incorporated into international legal instruments and institutions, they become embedded in structures that may constrain their transformative potential and reproduce North-South power imbalances. This is because these development objectives are circumscribed by capitalist imperialist structures, adapted to justify colonial practices and mobilized through racial differences. These structures are the essence of international law and its institutions even in the twenty-first century. They continue to animate broader socio-economic engagement with the global economy even in the present as well as in the legal and regulatory codes that support them. Thus, it is not surprising that even in current global health crisis, calls for this same transfer of technology in the form of a TRIPS waiver to scale up global vaccine production is being thwarted by the hegemony of developed states inevitably influenced by their respective pharmaceutical companies. The ‘emancipatory potential’ of TRIPS cannot be achieved if it was not created to be emancipatory in the first place. It also makes obvious the ways international IP law is not only unsuited to promote structural reform to enable the self-sufficiency and self-determination of the countries in the global south, but also produces asymmetries that perpetuate inequalities.

#### Expansion enables domestic manufacturing and innovation that decentralizes pharma supply chains.

HRW 21 — (Human Rights Watch, “Seven Reasons the EU is Wrong to Oppose the TRIPS Waiver“, 6-3-2021, Available Online at https://www.hrw.org/news/2021/06/03/seven-reasons-eu-wrong-oppose-trips-waiver, accessed 10-5-2021, HKR-AR)

The European Commission claims that intellectual property (IP) is not a barrier to scaling up the manufacturing of vaccines or other health products needed for the Covid-19 response, suggesting that sharing IP would not immediately speed up manufacturing. Right now, there are manufacturers with capacity to produce additional Covid-19 vaccines and other health products at factories in Bangladesh, Canada, Denmark, India, and Israel, but they are unable to contribute because they do not yet have the right licenses. So, **IP is a barrier to them.** The TRIPS waiver proposal sponsors and experts at the leading science journal Nature, Médecins Sans Frontières (MSF) Access Campaign, the Third World Network, and others have presented many other concrete examples of how enforcement of IP rules blocked, delayed, or limited production of chemical reagents for Covid-19 tests, ventilator valves, Covid-19 treatments, and elements of Covid-19 vaccines. IP constraints have not only led to vaccine shortages but have also led to shortages of key raw materials like bioreactor bags and filters.

Rather than manufacturers being held back by an inherent lack of manufacturing and technological capability, studies have shown that transnational claims to IP impede new manufacturers from entering and competing in the market. The same dynamics are playing out today with Covid-19.

Even though a waiver will not automatically expand production overnight, it paves the way for speedy technology transfers and manufacturing.

The waiver by itself will not automatically result in widespread and diversified manufacturing, but it will ease complex global rules governing IP and exports and give governments freedom to collaborate on technology transfers and exports **without fearing trade-based retaliation.** It will help reduce the dependence on any one country or region for medical products and mitigate the risks of export restrictions. With new variants emerging and some evidence that repeat vaccine boosters may be needed, the waiver will enable governments around the world to be prepared for a long-term response to Covid-19.

Experts have mapped out plans for how the manufacturing of mRNA and other vaccines, could be dramatically expanded in a relatively short period of time. Waiving certain IP rules in the TRIPS agreement over the next three years could help create diverse regional manufacturing hubs and protect the EU and the rest of the world from future pandemics, supply chain disruptions, and resulting economic disaster.

Concerns that widening the universe of producers may lower or compromise quality standards are unfounded because stringent regulatory authorities and the World Health Organization (WHO) would continue to play their existing role as arbiters of quality and safety for vaccines, which have a very stringent process for approval.

Dose-sharing and COVAX will not be enough to deliver universal and equitable vaccine access.

The European Commission points to its participation in COVAX to suggest that it is effectively leading efforts to promote equitable access to vaccines. Individual member states have begun to use COVAX to share some of the doses they prebooked with countries in need.

However, COVAX currently only aims to provide vaccines for 20 percent of participants’ populations, far from the coverage needed to end the pandemic. Vaccine supply shortages have already hampered COVAX’s ability to reach that target. The facility began delivering vaccine doses in late February, but has only been able to deliver 71 million vaccine doses to over 100 countries as of May 25, 2021 barely enough to cover 1 percent of the combined populations of those countries.

Further, COVAX is heavily dependent on AstraZeneca’s vaccines manufactured at the Serum Institute of India. Because of the huge surge in Covid-19 in India, the Indian government has currently restricted export of vaccines, and COVAX is facing a shortfall of 190 million vaccine doses. Serum Institute of India recently announced that it expects to resume supplying COVAX only by the end of 2021.

Finally, COVAX only applies to procurement and allocation of vaccines. India and South Africa’s proposal would cover a broader range of health products and technologies needed for the Covid-19 response including tests, treatments, personal protective equipment, and more. The devastating recent surge in infections and deaths in India, Brazil, and Nepal shows that we need more than vaccines to save lives.

Temporarily waiving patent monopolies will not end all future innovation to develop vaccines and drugs.

Pharmaceutical companies and their lobbying groups claim that patent monopolies to commercialize their inventions spur innovation and that waiving such monopoly rights during a devastating global pandemic, “would jeopardize future medical innovation, making us more vulnerable to other diseases.”

The UN Committee on Economic, Social and Cultural Rights stated in April 2020 that “[P]andemics are a crucial example of the need for scientific international cooperation to face transnational threats … [i]f a pandemic develops, sharing the best scientific knowledge and its applications, especially in the medical field, becomes crucial to mitigate the impact of the disease and to expedite the discovery of effective treatments and vaccines…. The Committee reiterates that ultimately, intellectual property is a social product and has a social function and consequently, States parties have a duty to prevent unreasonably high costs for access to essential medicines.”

It is a disservice to humanity to claim scientists and researchers would have no interest in developing lifesaving vaccines and drugs without the promise of patent monopolies. Jonas Salk, the inventor of the polio vaccine, did not claim any monopoly over it and gave it away for free. When he was asked who owned the patent for his vaccine, he reportedly said, “Well, the people, I would say. There is no patent. Could you patent the sun?”

### AC – Plan

#### Plan – The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines.

#### Flexibilities are insufficient.

Seklala et al 21 – Sharifah Sekalala, Warwick Law School, University of Warwick, Coventry, UK; Lisa Forman, Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada; Timothy Hodgson, International Commission of Jurists, Johannesburg, South Africa,;Moses Mulumba, Center for Health, Human Rights and Development, Kampala, Uganda; Hadijah Namyalo-Ganafa, School of Law, Makerere University, Kampala, Uganda; Benjamin Mason Meier, Department of Public Policy, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA (“Decolonising human rights: how intellectual property laws result in unequal access to the COVID-19 vaccine,” 2021, pg. 4) julian

Although countries from the Global South have the option of engaging TRIPS flexibilities in the absence of a general waiver, they often do not do so because the process of using these flexibilities is often stacked against them, reproducing neocolonial dynamics. For instance, TRIPS allows states with limited manufacturing capacity to waive a patent for a limited duration so as to import essential medicines through a compulsory licence. However, in practice, this process is lengthy and complex, as it relies on ensuring that both the importing and exporting countries have enacted local laws that permit them to use TRIPS flexibilities. Further, the importing country needs to negotiate with the pharmaceutical company in order to establish a fair price, which is always tricky, but made significantly more difficult in a crisis. To date, this process has been used only once, when Rwanda obtained access to generic antiretrovirals through an importation agreement with the Canadian company Apotex. However, even in that context, although Rwanda notified the WTO Council of its intention to use the mechanism in July 2007, it took 15 months before it could import its first batch of antiretrovirals. Despite its strong support, the manufacturer Apotex felt that the process was too cumbersome to use again.36

This complexity has been heightened during the COVID-19 crisis due to the speed at which vaccines were manufactured, which has created a lack of transparency around the patent process.37 Thus, the Bolivian government, which is seeking to use TRIPS flexibilities through compulsory licences, recognises in their application that there is a lack of clarity around the exact extent of product and process patents for any of the existing COVID-19 vaccines due to inadequate information about manufacturing or regulatory processes in different countries.38 Additionally, many countries that have manufacturing capacity, such as those in the EU, have not sought to support countries in the Global South that want to use these flexibilities. In sum, cumbersome rules, political and economic pressures and a lack of transparency conspire to enable the Intellectual Property Regime (IPR) system to sustain and deepen global health inequities.

#### Counterfeiting, innovation, donation, and manufacturing arguments are all wrong—strong domestic manufacturing is essential to pandemic containment.

Gostin 21 — (Lawrence O Gostin, Lawrence O. Gostin is professor of global health law, Georgetown University, and directs the World Health Organization Center on Global Health Law. His book "Global Health Security: A Blueprint for the Future"will be published in Oct. 2021, “Biden’s plan to vaccinate the world won’t work. Here’s a better one. “, Washington Post, 9-27-2021, Available Online at https://www.washingtonpost.com/outlook/2021/09/27/biden-vaccines-globe-inequity-donations/, accessed 10-5-2021, HKR-AR)

Ramped up charitable donations are urgently needed but they will never be enough to meet global need. That’s why vastly increased manufacturing of vaccines abroad makes more sense than a donations-only approach. Donations — whether of personal protective equipment (PPE), oxygen or vaccines — always seem to come late and in insufficient quantities. Empowering regional hubs to manufacture their own vaccines, in contrast, would amplify supplies globally and enable countries to serve their own needs and that of their regions — whether Africa, Latin America or Asia.

The most likely vaccine candidates for regional production also happen to be the most technologically advanced. That’s because mRNA vaccines can be manufactured more rapidly, and at larger scale, more easily than traditional vaccine technologies, such as that used in the Johnson & Johnson vaccine. (MRNA vaccines are produced by small chemical reactions and don’t need living components, like the weakened or inactivated viruses used in traditional vaccines). They are also more easily adapted to target emerging variants, because it’s possible to replace one sequence of mRNA in the vaccine for another in a matter of weeks. But Pfizer-BioNTech and Moderna have thus far kept their intellectual property and trade secrets close to the chest. (Moderna has said it will not enforce its patents related to its coronavirus vaccine, but that doesn’t mean it will share its patented information with others, let alone its manufacturing know-how.)

The vaccines were hardly developed purely by the private sector: Moderna received $2.5 billion from Operation Warp Speed, both Moderna and Pfizer benefited from over a decade of National Institutes of Health basic research funding for mRNA technologies, and NIH holds several key mRNA patents.

That strengthens the case for forcing the companies — in the name of national defense — to share their technologies. Under the DPA, the government would compensate the companies both for the costs of any additional production and for the technology-sharing arrangements. The government would determine “reasonable” compensation, and the drug companies could challenge the sum in courts, but there is nothing outrageous about this: The Fifth Amendment to the Constitution requires “just compensation” for a “taking,” which is simply the fair market value for the property, including intellectual property.

Some observers might worry that sharing our cutting-edge technologies in this way would lead to its being co-opted by other countries, especially adversaries such as China or Russia. We could hedge against that threat by requiring that foreign producers keep innovative technologies confidential and secure. And these producers would have to pledge to exclusively serve low-income markets, and not usurp richer markets in the United States and Europe. We’ve used that model before to empower foreign manufacturers to make antiretroviral medications for HIV.

Many have argued that foreign manufacturers don’t have the technical competence to produce cutting-edge vaccines. But countries including India, Brazil and Vietnam have a proven track record in vaccine production. And South Africa is already establishing a major mRNA vaccine technology transfer hub, with the support of the World Health Organization. (All it’s waiting for is cooperation from the innovator drug companies.) Countries such as Australia, Singapore and South Korea have invested in advanced vaccine technology but they, too, require cooperation from Pfizer and Moderna.

#### Status quo medical innovation results in inequality, which the aff corrects.

Parthasarathy 20 – Shobita Parthasarathy is Professor of Public Policy and Director of the Science, Technology, and Public Policy Program at University of Michigan. (“Innovation Policy, Structural Inequality, and COVID-19,” 2020, pg. 105-107) julian

(1) Minimal Funding for Health Disparities Research. The US approach to research funding has left us unprepared for and unable to manage the disproportionate health impacts of the virus among people of color, especially Black communities. The NIH, the world’s largest public funder of biomedical research, devotes little money to this subject. One analysis found that it spends 500 times more on genetics research as on structural racism and its impacts on health (Krieger 2005). This is not surprising in a system where scientists drive funding priorities, and where investigators from historically disadvantaged minority groups struggle to receive funding. The needs and concerns of disadvantaged minorities may seem less important or urgent to most scientists (Shavers et al. 2005). But this scarcity has left us without the evidence to understand why communities of color are disproportionately suffering and dying from COVID-19, or what steps to take to address this imbalance.

2) Uncoordinated Research and Development Creates Uneven Access to Diagnostic Testing. Absent the “rigid controls” that Bush dismissed, the US innovation system is highly decentralized and market-driven. So, diagnostic testing for SARS-CoV-2 (the virus that causes COVID-19) has been essentially impossible to coordinate. Traditionally, the Centers for Disease Control and Prevention and public laboratories funded by state and local governments lead infectious disease surveillance, but they have limited capacity (Crawford et al. 2010). The COVID-19 pandemic created demand that far outstripped what these laboratories could provide, but there was no systematic way to expand capacity. A variety of laboratories, including at universities, stepped up, but it remains difficult to connect supply and demand (Maxmen 2020). Different electronic records platforms cannot communicate. Some hospitals have exclusive partnerships with big commercial laboratories. And, even as testing has become more available, white and higher income communities gain access more easily (McMinn et al. 2020).

By contrast, South Korea has been widely praised for its SAR-CoV-2 testing strategy (Thompson 2020). Three weeks after the Chinese government shared the virus’s genome sequence on January 12, the South Korean government approved multiple diagnostic tests developed by its biotechnology sector (The Government of the Republic of Korea 2020). The country’s National Health Insurance Corporation purchased and distributed them. Ultimately, testing was plentiful and widespread, and the government implemented a companion contact-tracing program that minimized the number of COVID-19 cases and deaths.

Certainly, South Korea has learned from its experiences with previous coronaviruses, and benefits from a nationally coordinated healthcare system. But the rapid and straightforward development and distribution of diagnostic testing is also the result of a different approach to innovation policy than what the United States has taken up. Since the 1960s, South Korea’s government has played a major role in shaping research and development including in the industrial sector, by building capacity and setting priorities (Yim and Kim 2005). Government and industry have close professional ties and a sense of shared goals. In the years before COVID-19, for example, the South Korean government funded multiple companies developing viral diagnostic testing (The Government of the Republic of Korea 2020). With these relationships, technologies, and coordination with the healthcare system established, the government was able to immediately ask the private sector to develop SARS-CoV-2 tests. Three of the first five companies to receive emergency regulatory approval had received government funding for their diagnostics research. This proactive capacity building ensured that there was no need to ration testing, and therefore no inequality in access.

(3) Patent Policies Limit Access to Essential Technologies. While patents provide an incentive to innovate, the exclusive rights of commercialization they carry can make the most valuable technologies the most expensive. There is growing concern that COVID-19 treatments and vaccines will be priced out of reach for many, despite their importance for public health and economic recovery. Consider the case of remdesivir, a promising COVID-19 treatment developed with the help of US government and university scientists but which biotechnology company Gilead Sciences has patented and commercialized (Ardizzone 2020). Gilead has a long history of charging high prices for its patented drugs, including hepatitis C drug Sovaldi which costs $84,000 for a 12-week course of treatment (Senior 2014). The company must now balance pressure from its investors against its interpretation of civic duty as it determines pricing for this promising COVID-19 drug.

#### Reject their posturing about dangerous development---the west spins false narratives that perpetuates scientific racism.

Merelli 21 (Annalisa Merelli 5-28**.** [(Reporter at Quartz) “Big pharma wants you to think sharing vaccine patents overseas is very dangerous” <https://qz.com/2013661/big-pharma-argues-poor-nations-cant-be-trusted-to-make-vaccines/>] TDI

When it comes to the suspension of patents for Covid-19 vaccines, **it’s big pharma against the world**—or most of it, anyway. Earlier this month, the US government expressed its support of a waiver to the international agreements governing intellectual property rights. The waiver, proposed in November 2020 by India and South Africa, would allow poor countries to produce Covid-19 vaccines without paying pharmaceutical companies for patent rights, at least until the pandemic is over. This would help increase the global supply of vaccines at a lower price, and make progress toward the goal of vaccinating the global population by the end of the year. The proposal, to be negotiated through the World Trade Organization, gained the support of many countries, especially low- and middle-income, but found resistance among rich ones, including the EU, Switzerland, the UK, Australia, Canada and, initially, the US. However, the US lifted its opposition earlier this month to expand vaccine supply and access to bring the pandemic to a faster end. With the US government putting its weight behind the proposal, its approval is much more likely. Vaccine apartheid Waiving the Trade-Related Aspects of Intellectual Property Rights agreement (TRIPS), while also allowing the sharing of manufacturing know-how, is key to boosting the global production of Covid-19 vaccine, advocates say. Ethically speaking, it’s even more urgent now than when the proposal was introduced. The world is experiencing a two-speed pandemic, with wealthy nations moving back toward normalcy, and poor ones experiencing new outbreaks and dealing with a lack of vaccines and therapeutics. It is a situation the World Health Organization (WHO) has denounced as “vaccine apartheid.” But ethics aren’t the only reason to commit to expanding vaccination capacity by any means possible. As long as there are Covid-19 outbreaks, the chance that vaccine-resistant variants might emerge persists—as goes the global health community‘s mantra “Covid anywhere is Covid everywhere.” Yet the pharmaceutical industry isn’t exactly on board with missing out on patent profits. The International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) has expressed disappointment at the US’s stand, claiming the patent waiver won’t help produce more doses, and calling instead for a lowering of trade barriers that would make it easier for western manufacturers to sell vaccines to poorer countries. “The TRIPS waiver […] could spur a spate of confusing, mutually inconsistent, and heavy-handed “compulsory” demands by governments all over the world for supply and technology transfer,” warned Michelle McMurry-Heath, the president of the Biotechnology Innovation Organization, in a statement. **A false risk narrative** The Pharmaceutical Research and Manufacturers of America (PhRMA), the trade organization representing the biggest US drug companies, has published polling results that shows a majority of Americans oppose the waiver. But the framing of their questions betrays the not-so-subtle suggestion that suspending patents would create safety concerns—for those who would receive the vaccines. In one survey, responders were asked whether poorer countries should be allowed to manufacture the vaccines even though they may be less safe. In another, they were asked whether they were concerned about the fact that other countries might not have the same quality standards as the US, or that the risk of getting counterfeit vaccines might be higher if production was expanded to poor countries. Unsurprisingly, a majority of people found these scenarios concerning. The myth that making vaccines in poor countries might be dangerous is very dear to pharmaceutical companies. “Entities with little or no experience in manufacturing vaccines are likely to chase the very raw materials we require to scale our production, putting the safety and security of all at risk,” wrote Pfizer CEO Albert Bourla in a statement. A narrative as old as AIDS “**The history behind this particular tactic of questioning the safety of manufacturers in other parts of the world has been played out on various** occasions,” says Tahir Amin, the co-founder of I-MAK, a US-based organization working to increase global access to medicines Perhaps the most egregious precedent is the dispute between big pharma and poor countries over the making of antiretroviral drugs for AIDS, which cost about $10,000 per person per year before the introduction of generics that brought the price down to $300 per person per year. A famous episode of that battle culminated in court in 1998, when a coalition of multinational drugmakers and the South African Pharmaceutical Manufacturers Association sued the Nelson Mandela-led South African government for its attempts to encourage the local, patent-free production of more affordable AIDS medications, although eventually the charges were dropped. At the time, western pharmaceutical companies claimed drugs made in developing countries didn’t meet the necessary quality standards, **though research repeatedly found that there was no reason to think so.** “Had it not been for generics manufacturers in the global south, we wouldn’t have gotten more people treated with antiretrovirals, **and we’ve seen that generics are very much safe and the quality is not questioned**,” says Amin. A matter of prejudice Granted, vaccines are more difficult than oral drugs to produce, but big vaccine makers in developing countries including India—the biggest vaccine producer in the world—have long been used by UNICEF and other global development agencies to produce their vaccines, **with constant scrutiny of their quality.** In fact, poor countries have even been able to develop their own vaccines, as is the case of the hepatitis B vaccine developed by Shanta Biotechnics in India. The price of the vaccine made by western countries ($23 per dose in the 1980s) was prohibitive, so a local pharmaceutical company set out to develop its own formulation, at a cost of $1 per dose. This led to a mass inoculation against the virus, with over 120 million doses distributed worldwide to poor countries. **“There is this ‘scientific racism’ that exists in the west**, that we are still living in colonial times where science was only done by the rich global north,” says Amin. The prejudice that vaccines and drugs made by poorer countries won’t meet the standards of wealthy countries doesn’t just extend to the manufacturing capacity, but to the quality assurance provided by the governing bodies of those countries. Effectively, the US pharma industry is claiming greater expertise at verifying the quality of pharmaceutical products than the national and international bodies working with producers outside the western world. “Nobody wants to see poor quality vaccines, but in this spotlight, I think everyone that is coming up with a version of the vaccine is going to really check their manufacturing practices,” says Amin. What makes the skepticism toward vaccines made in poor countries even more contradictory is that often the actual ingredients bought by western manufacturers to produce their drugs are produced in India or China. **So the very same companies that are raising doubts about the quality of products made by manufacturers in poor countries trust them for their raw materials.**

### AC – Framing

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

#### 1] Pleasure and pain *are* intrinsic value and disvalue – everything else *regresses* – robust neuroscience.

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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.

#### 2] Actor spec – governments lack wills or intentions and inevitably deals with tradeoffs – outweighs because agents have differing obligations. No Intent Foresight Distinction – All actions are forward-looking, so intentions are constituted by foreseen consequences. Takes out util calc indicts since they’re empirically denied and link turns them because the alt would be *no* action.

#### 3] Be aware of selection bias and the conjunctive fallacy – each internal-link is a misleading snapshot of risk and infinitely reduces the probability of the next

Conetta 98 (Carl Conetta, Director of the Project on Defense Alternatives, Research Fellow of the Institute for Defense and Disarmament Studies, researcher and awarded author at the Pentagon, US State Department, US House Armed Services Committee, Army War College, National Defense University, and UNIDIR, March 1998, "Global Beat: Dueling with Uncertainty: The New Logic of American Military Planning," Project on Defense Alternatives, http://www.bu.edu/globalbeat/usdefense/conetta0398.html, Accessed: 11-7-2017 /Kent Denver-NK)

Playing with Wild Cards Without doubt, simulations -- including nonstandard ones -- can aid planning. The question is: To what end? And to what effect? Exploring "wild cards" in order to identify warning signs or to define limits is one thing; using them to establish force structure or modernization requirements, quite another. Especially suspect would be using scenarios that are detached from declared US interests to define current requirements; this would put the military "cart" before the political "horse." Another, broader concern is how the effusion of improbable conflict scenarios affects public policy discourse overall. Conflict scenarios, both wild and tame, can gain more credibility in the telling than they deserve. Cognitive researcher Massimo Piattelli-Palmarini calls this the "Othello effect," referring to the trail of plausible but false suppositions that led Othello to murder his wife, Desdemona. Even the most farfetched scenarios comprise a number of steps or links each of which may seem plausible or even probable given the one that came before. Although the likelihood of the scenario dwindles with each step, the residual impression is one of plausibility. Omitted are the many branches at each step that would lead to a neutral or even positive outcome. The resulting snapshots, although numerous, offer a highly-selective view of what the future may hold. And the fact that only the negative outcomes are articulated and exercised can distort the general public impression of risk. Living with Uncertainty There is no escape from uncertainty, but there is relief from uncertainty hysteria. It begins with recognizing that instability has boundaries -- just as turbulence in physical systems has discernable onset points and parameters. The turbulence of a river, for instance, corresponds to flow and to the contours of the river's bed and banks. It occurs in patches and not randomly. The weather also is a chaotic system that resists precise long-range forecasting, but allows useful prediction of broader trends and limits. Despite uncertainty, statements of probability matter. They indicate the weight of evidence -- or whether there is any evidence at all. The uncertainty hawks would flood our concern with a horde of dangers that pass their permissive test of "non-zero probability." However, by lowering the threshold of alarm, they establish an impossible standard of defense sufficiency: absolute and certain military security. Given finite resources and competing ends, something less will have to do. Strategic wisdom begins with the setting of priorities -- and priorities demand strict attention to what appears likely and what does not.

#### 4] Structural violence is the most important impact – ignoring them actively exacerbates exclusion.

Winter and Leighton 99 |Deborah DuNann Winter and Dana C. Leighton. Winter|Psychologist that specializes in Social Psych, Counseling Psych, Historical and Contemporary Issues, Peace Psychology. Leighton: PhD graduate student in the Psychology Department at the University of Arkansas. Knowledgable in the fields of social psychology, peace psychology, and justice and intergroup responses to transgressions of justice “Peace, conflict, and violence: Peace psychology in the 21st century.” Pg 4-5

Direct violence is horrific, but its brutality usually gets our attention: we notice it, and∂ often respond to it. Structural violence, however, is almost always invisible, embedded in∂ubiquitous social structures, normalized by stable institutions and regular experience.∂ Structural violence occurs whenever people are disadvantaged by political, legal,∂ economic, or cultural traditions. Because they are longstanding, structural inequities∂usually seem ordinary—the way things are and always have been. But structural violence∂ produces suffering and death as often as direct violence does, though the damage is∂ slower, more subtle, more common, and more difficult to repair. The chapters in this∂ section teach us about some important but invisible forms of structural violence, and alert∂ us to the powerful cultural mechanisms that create and maintain them over generations.∂ Johan Galtung originally framed the term “structural violence” to mean any constraint∂ on human potential caused by economic and political structures (1969). Unequal accessto resources, to political power, to education, to health care, or to legal standing, are forms of structural violence. When inner-city children have inadequate schools while∂ others do not, when gays and lesbians are fired for their sexual orientation, when laborers∂ toil in inhumane conditions, when people of color endure environmental toxins in their∂ neighborhoods, structural violence exists. Unfortunately, even those who are victims of∂ structural violence often do not see the systematic ways in which their plight is∂ choreographed by unequal and unfair distribution of society’s resources. Such is the∂ insidiousness of structural violence.∂ Structural violence is problematic in and of itself, but it is also dangerous because it∂frequently leads to direct violence. The chronically oppressed are often, for logical∂ reasons, those who resort to direct violence. Organized armed conflict in various parts of∂ the world is easily traced to structured inequalities. Northern Ireland, for example, has∂ been marked by economic disparities between Northern Irish Catholics—who have∂ higher unemployment rates and less formal education—and Protestants (Cairns & Darby,∂ 1998). In Sri Lanka, youth unemployment and underemployment exacerbates ethnic∂ conflict (Rogers, Spencer, & Uyangoda, 1998). In Rwanda, huge disparities in both∂ income and social status between the Hutu and Tutsis eventually led to ethnic massacres.∂ While structural violence often leads to direct violence, the reverse is also true, as∂ brutality terrorizes bystanders, who then become unwilling or unable to confront social∂ injustice. Increasingly, civilians pay enormous costs of war, not only through death, but∂ through devastation of neighborhoods and ecosystems. Ruling elites rarely suffer from∂ armed conflict as much as civilian populations do, who endure decades of poverty and∂ disease in war-torn societies.ecognizing the operation of structural violence forces us to ask questions about how∂ and why we tolerate it, questions that often have painful answers. The first chapter in this∂ section, “Social Injustice,” by Susan Opotow, argues that our normal perceptual/cognitive∂ processes lead us to care about people inside our scope of justice, but rarely care about∂ those people outside. Injustice that would be instantaneously confronted if it occurred to∂ someone we love or know is barely noticed if it occurs to strangers or those who are∂ invisible or irrelevant to us. We do not seem to be able to open our minds and our hearts∂ to everyone; moral exclusion is a product of our normal cognitive processes. But Opotow∂ argues convincingly that we can reduce its nefarious effects by becoming aware of our distorted perceptions. Inclusionary thinking can be fostered by relationships,∂ communication, and appreciation of diversity.∂ One outcome of exclusionary thinking is the belief that victims of violence must in∂ some way deserve their plight. But certainly it is easy to see that young children do not∂ deserve to be victims. The next two chapters in this section address the violence∂ experienced by children. In the first, “The War Close to Home: Children and Violence in∂ the United States,” Kathleen Kostelny and James Garbarino describe the direct and∂ structural violence which children in Chicago and other urban areas of the United States∂ endure, paralleling that experienced by children who live in countries at war. Children∂ who endure these environments often become battle weary, numb, hopeless, and/or∂ morally impaired. But children not only suffer directly from violence, they also suffer∂ from the impaired parenting and communities which poverty inflicts. The authors∂ describe how community and family support mechanisms can mitigate these effects. For xample, home visitation and early childhood education programs provide crucial family∂ and community support.∂ While Kostelny and Garbarino focus on community intervention techniques, Milton∂ Schwebel and Daniel Christie, in their article “Children and Structural Violence,” extend∂ the analysis of structural violence by examining how economic and psychological∂ deprivation impairs at-risk children. Children living in poverty experience diminished∂ intellectual development because parents are too overwhelmed to be able to provide∂ crucial linguistic experiences. Schwebel and Christie’s discussion concludes that∂ economic structures must provide parents with living-wage employment, good prenatal∂ medical care, and high-quality child-care if we are to see the next generation develop into∂ the intelligent and caring citizens needed to create a peaceful world.∂ If children are the invisible victims of society’s structural violence, so are their∂ mothers. In the chapter “Women, Girls, and Structural Violence: A Global Analysis,”∂ Diane Mazurana and Susan McKay articulate the many ways in which global sexism∂ systematically denies females access to resources. From health care and food to legal∂ standing and political power, women and girls get less than males in every country on the∂ planet. Mazurana and McKay argue that patriarchy-based structural violence will not be∂ redressed until women are able to play more active roles making decisions about how∂ resources are distributed.∂ Patriarchal values also drive excessive militarism, as Deborah Winter, Marc Pilisuk,∂ Sara Houck, and Matthew Lee argue in their chapter “Understanding Militarism: Money,∂ Masculinism, and the Search for the Mystical.” The authors illuminate three motives ueling excessive military expenditures: money, which, because of modern market forces,∂ leads half the world’s countries to spend more on arms than on health and education∂ combined; masculinism, which leads societies to make soldiering a male rite of passage∂ and proof of manhood; and the search for the mystical, as men attempt to experience∂ profound human processes of selfsacrifice, honor, and transcendence through war. Like∂ William James, these authors argue that we will need to find a moral equivalent to war, in∂ order to build lasting peace.

#### 7] A probability-centric framework is best.

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In Astronomical Waste, Nick **Bostrom makes a** more **extreme** and more specific **claim: that** the number of human lives possible under space colonization is so great that **the mere possibility of a** hugely **populated future**, when considered in an “expected value” framework, **dwarfs all other moral considerations**. I see no obvious analytical flaw in this claim, and give it some weight. However, **because the argument relies** heavily **on specific predictions about a distant future**, seemingly (as far as I can tell) **backed by little other than speculation**, I do not consider it “robust,” and so **I do not consider it rational to let it play a**n overwhelming **role in** my belief system and **actions**. (More on my epistemology and method for handling non-robust arguments containing massive quantities here.) In addition, if I did fully accept the reasoning of “Astronomical Waste” and evaluate all actions by their far future consequences, it isn’t clear what implications this would have. As discussed below, given our uncertainty about the specifics of the far future and our reasons to believe that doing good in the present day can have substantial impacts on the future as well, it seems possible that “seeing a large amount of value in future generations” and “seeing an overwhelming amount of value in future generations” lead to similar consequences for our actions. Catastrophic risk reduction vs. doing tangible good Many people have cited “Astronomical Waste” to me as evidence that the greatest opportunities for doing good are in the form of reducing the risks of catastrophes such as extreme climate change, pandemics, problematic developments related to artificial intelligence, etc. Indeed, “Astronomical Waste” seems to argue something like this: For standard utilitarians, priority number one, two, three and four should consequently be to reduce existential risk. The utilitarian imperative “Maximize expected aggregate utility!” can be simplified to the maxim “Minimize existential risk!”. I have always found this inference flawed, and in my recent discussion with Eliezer Yudkowsky and Luke Muehlhauser, it was argued to me that the “Astronomical Waste” essay never meant to make this inference in the first place. The author’s definition of existential risk includes anything that stops humanity far short of realizing its full potential - including, presumably, stagnation in economic and technological progress leading to a long-lived but limited civilization. Under that definition, “**Minimize existential risk!” would** seem to potentially **include any contribution to general human empowerment**. I have often been challenged to explain how **one could** possibly **reconcile** (a) **caring** a great deal **about the far future with** (b) **donating to** one of GiveWell’s top **charitie**s. My general response is that **in the face of sufficient uncertainty** about one’s options, and lack of conviction that there are good (in the sense of high expected value) opportunities to make an enormous difference, **it is rational to try to make a smaller but robustly positive difference, whether or not one can trace a specific causal pathway from doing this small amount of good to making a large impact on the far future.** A few brief arguments in support of this position: I believe that **the track record of “taking robustly strong opportunities to do ‘something good’ ” is far better than the track record of “taking actions whose value is contingent on high-uncertainty arguments about where the highest utility lies**, and/or arguments about what is likely to happen in the far future.” This is true even when one evaluates track record only in terms of seeming impact on the far future. The developments that seem most positive in retrospect - from large ones like the development of the steam engine to small ones like the many economic contributions that facilitated strong overall growth - seem to have been driven by the former approach, and I’m not aware of many examples in which the latter approach has yielded great benefits. I see some sense in which the world’s overall civilizational ecosystem seems to have done a better job optimizing for the far future than any of the world’s individual minds. It’s often the case that people **acting on** relatively **short-term, tangible considerations** (especially when they did so with creativity, integrity, transparency, consensuality, and pursuit of gain via value creation rather than value transfer) **have done good in ways they themselves wouldn’t have been able to foresee**. If this is correct, it seems to imply that **one should be focused on “playing one’s role as well as possible”** - on finding opportunities to “beat the broad market” (to do more good than people with similar goals would be able to) **rather than pouring one’s resources into the** areas that non-robust estimates have indicated as most important to the **far future**. **The process of trying to accomplish tangible good can lead to a great deal of learning and unexpected positive developments, more so** (in my view) **than** the process of putting resources into a low-feedback endeavor based on **one’**s current **best-guess theory**. In my conversation with Luke and Eliezer, the two of them hypothesized that the greatest positive benefit of supporting GiveWell’s top charities may have been to raise the profile, influence, and learning abilities of GiveWell. If this were true, I don’t believe it would be an inexplicable stroke of luck for donors to top charities; rather, it would be the sort of development (facilitating feedback loops that lead to learning, organizational development, growing influence, etc.) that is often associated with “doing something well” as opposed to “doing the most worthwhile thing poorly.” I see multiple reasons to believe that **contributing to general human empowerment mitigates global catastrophic risks**. I laid some of these out in a blog post and discussed them further in my conversation with Luke and Eliezer. For one who accepts these considerations, it seems to me that: It is not clear whether placing enormous value on the far future ought to change one’s actions from what they would be if one simply placed large value on the far future. In both cases, **attempts to reduce global catastrophic risks** and otherwise plan for far-off events **must be weighed against attempts to do tangible good**, and the question of which has more potential to shape the far future will often be a difficult one to answer. If one sees few robustly good opportunities to “make a huge difference to the far future,” **the best approach to making a positive far-future difference may be “make a small but** robustly **positive difference to the present**.” One ought to be interested in “unusual, outstanding opportunities to do good” even if they don’t have a clear connection to improving the far future.