### 1

#### Climate Patents and Innovation high now and solving Warming but COVID waiver sets a dangerous precedent for appropriations - the mere threat is sufficient is enough to kill investment.

Brand 5-26, Melissa. “Trips Ip Waiver Could Establish Dangerous Precedent for Climate Change and Other Biotech Sectors.” IPWatchdog.com | Patents & Patent Law, 26 May 2021, www.ipwatchdog.com/2021/05/26/trips-ip-waiver-establish-dangerous-precedent-climate-change-biotech-sectors/id=133964/. //sid

The **biotech** industry is making remarkable **advances towards climate change solutions**, and it is precisely for this reason that it can expect to be in the crosshairs of potential IP waiver discussions. President Biden is correct to refer to climate change as an existential crisis. Yet it does not take too much effort to connect the dots between President Biden’s focus on climate change and his Administration’s recent commitment to waive global IP rights for Covid vaccines (TRIPS IP Waiver). “This is a global health crisis, and the extraordinary circumstances of the COVID-19 pandemic call for extraordinary measures.” If an IP waiver is purportedly necessary to solve the COVID-19 global health crisis (and of course [we dispute this notion](https://www.ipwatchdog.com/2021/04/19/waiving-ip-rights-during-times-of-covid-a-false-good-idea/id=132399/)), can we really feel confident that this or some future Administration will not **apply** the **same logic to** the **climate crisis**? And, without the confidence in the underlying IP for such solutions, what does this mean for U.S. innovation and economic growth? United States Trade Representative (USTR) [Katherine Tai](https://www.ipwatchdog.com/2021/05/05/tai-says-united-states-will-back-india-southafrica-proposal-waive-ip-rights-trips/id=133224/) was subject to questioning along this very line during a recent Senate Finance Committee hearing. And while Ambassador Tai did not affirmatively state that an IP waiver would be in the future for climate change technology, she surely did not assuage the concerns of interested parties. The United States has historically supported robust IP protection. This support is one reason the United States is the center of biotechnology innovation and leading the fight against COVID-19. However, a brief review of the domestic legislation arguably most relevant to this discussion shows just how far the international campaign against IP rights has eroded our **normative position**. The Clean Air Act, for example, contains a provision allowing for the mandatory licensing of patents covering certain devices for reducing air pollution. Importantly, however, the patent owner is accorded due process and the statute lays out a detailed process regulating the manner in which any such license can be issued, including findings of necessity and that no reasonable alternative method to accomplish the legislated goal exists. Also of critical importance is that the statute requires compensation to the patent holder. Similarly, the Atomic Energy Act contemplates mandatory licensing of patents covering inventions of primary importance in producing or utilizing atomic energy. This statute, too, requires due process, findings of importance to the statutory goals and compensation to the rights holder. A TRIPS IP waiver would operate outside of these types of frameworks. There would be no **due process**, no particularized findings, no **compensation and** no **recourse**. Indeed, the fact that the World Trade Organization (WTO) already has a process under the TRIPS agreement to address public health crises, including the compulsory licensing provisions, with necessary guardrails and compensation, makes quite clear that the waiver would operate as a free for all. Forced Tech Transfer Could Be on The Table When being questioned about the scope of a potential TRIPS IP waiver, Ambassador Tai invoked the proverb “Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime.” While this answer suggests primarily that, in times of famine, the Administration would rather give away other people’s fishing rods than share its own plentiful supply of fish (here: actual COVID-19 vaccine stocks), it is apparent that in Ambassador Tai’s view waiving patent rights alone would not help lower- and middle-income countries produce their own vaccines. Rather, they would need to be taught how to make the vaccines and given the biotech industry’s manufacturing know-how, sensitive cell lines, and proprietary cell culture media in order to do so. In other words, Ambassador Tai acknowledged that the scope of the current TRIPS IP waiver discussions includes the concept of forced tech transfer. In the context of climate change, the idea would be that companies who develop successful methods for producing new **seed technologies and sustainable biomass, reducing greenhouse gases** in manufacturing **and** transportation, **capturing** and sequestering **carbon** in soil and products, and more, **would be required to turn over their proprietary know-how** to global competitors. While it is unclear how this concept would work in practice and under the constitutions of certain countries, the suggestion alone could be devastating **to voluntary international collaborations**. Even if one could assume that the United States could not implement forced tech transfer on its own soil, what about the governments of our international development partners? It is not hard to understand that a U.S.-based company developing climate change technologies would be unenthusiastic about partnering with a company abroad knowing that the foreign country’s government is on track – with the assent of the U.S. government – to change its laws and seize proprietary materials and know-how that had been voluntarily transferred to the local company. Necessary Investment Could Diminish Developing climate change solutions is not an easy endeavor and bad policy positions threaten the likelihood that they will materialize. These products have long lead times from research and development to market introduction, owing not only to a high rate of failure but also rigorous regulatory oversight. Significant investment is required to sustain and drive these challenging and long-enduring endeavors. For example, synthetic biology companies critical to this area of innovation [raised over $1 billion in investment in the second quarter of 2019 alone](https://www.bio.org/sites/default/files/2021-04/Climate%20Report_FINAL.pdf). If investors cannot be confident that IP will be in **place to protect important climate change technologies** after their long road from bench to market, **it is unlikely they will** continue to **invest at** the current and **required levels.**

#### Private sector innovation is key to solve climate change – short term politicking and priority shifts means government can’t solve alone.

Henry 17, Simon. “Climate Change Cannot Be Solved by Governments Alone. How Can the Private Sector Help?” World Economic Forum, 21 Nov. 2017, www.weforum.org/agenda/2017/11/governments-alone-cannot-halt-climate-change-what-can-private-sector-do/.  Programme Director, International Carbon Reduction & Offset Alliance (ICROA) //sid

Climate leadership is also an opportunity for many organizations, and this was the most popular reason for purchasing carbon credits in Ecosystem Marketplace’s [2016 survey of buyers](http://www.forest-trends.org/documents/files/doc_5677.pdf%5Bforest-trends.org%5D). Companies are looking to differentiate from their competitors, and build their brand, by taking a leadership role on climate. Offsetting plays an integral role in delivering this climate leadership status, alongside direct emissions reductions. The survey indicated that companies that included offsetting in their carbon management strategy typically spend about 10 times more on emissions reductions activities than the typical company that doesn’t offset.

Beyond these direct commercial reasons for companies to take voluntary action, there are many broader, societal motivations at play. Climate change is a global, multidecade challenge that needs solutions and input from all stakeholders. It transcends the short-term nature of politics, which will inevitably experience changes in priorities, personnel and knowledge. Because of this, climate change cannot be solved by governments alone. Instead, it needs significant and long-term investment from the private sector. Companies that take a longer-term outlook recognise this and want to contribute to the solution to help secure the viability of their businesses.

#### Warming causes Extinction

Kareiva 18, Peter, and Valerie Carranza. "Existential risk due to ecosystem collapse: Nature strikes back." Futures 102 (2018): 39-50. (Ph.D. in ecology and applied mathematics from Cornell University, director of the Institute of the Environment and Sustainability at UCLA, Pritzker Distinguished Professor in Environment & Sustainability at UCLA)//Re-cut by Elmer

In summary, six of the nine proposed planetary boundaries (phosphorous, nitrogen, biodiversity, land use, atmospheric aerosol loading, and chemical pollution) are unlikely to be associated with existential risks. They all correspond to a degraded environment, but in our assessment do not represent existential risks. However, the three remaining boundaries (**climate change**, global **freshwater** cycle, **and** ocean **acidification**) do **pose existential risks**. This is **because of** intrinsic **positive feedback loops**, substantial lag times between system change and experiencing the consequences of that change, and the fact these different boundaries interact with one another in ways that yield surprises. In addition, climate, freshwater, and ocean acidification are all **directly connected to** the provision of **food and water**, and **shortages** of food and water can **create conflict** and social unrest. Climate change has a long history of disrupting civilizations and sometimes precipitating the collapse of cultures or mass emigrations (McMichael, 2017). For example, the 12th century drought in the North American Southwest is held responsible for the collapse of the Anasazi pueblo culture. More recently, the infamous potato famine of 1846–1849 and the large migration of Irish to the U.S. can be traced to a combination of factors, one of which was climate. Specifically, 1846 was an unusually warm and moist year in Ireland, providing the climatic conditions favorable to the fungus that caused the potato blight. As is so often the case, poor government had a role as well—as the British government forbade the import of grains from outside Britain (imports that could have helped to redress the ravaged potato yields). Climate change intersects with freshwater resources because it is expected to exacerbate drought and water scarcity, as well as flooding. Climate change can even impair water quality because it is associated with heavy rains that overwhelm sewage treatment facilities, or because it results in higher concentrations of pollutants in groundwater as a result of enhanced evaporation and reduced groundwater recharge. **Ample clean water** is not a luxury—it **is essential for human survival**. Consequently, cities, regions and nations that lack clean freshwater are vulnerable to social disruption and disease. Finally, ocean acidification is linked to climate change because it is driven by CO2 emissions just as global warming is. With close to 20% of the world’s protein coming from oceans (FAO, 2016), the potential for severe impacts due to acidification is obvious. Less obvious, but perhaps more insidious, is the interaction between climate change and the loss of oyster and coral reefs due to acidification. Acidification is known to interfere with oyster reef building and coral reefs. Climate change also increases storm frequency and severity. Coral reefs and oyster reefs provide protection from storm surge because they reduce wave energy (Spalding et al., 2014). If these reefs are lost due to acidification at the same time as storms become more severe and sea level rises, coastal communities will be exposed to unprecedented storm surge—and may be ravaged by recurrent storms. A key feature of the risk associated with climate change is that mean annual temperature and mean annual rainfall are not the variables of interest. Rather it is extreme episodic events that place nations and entire regions of the world at risk. These extreme events are by definition “rare” (once every hundred years), and changes in their likelihood are challenging to detect because of their rarity, but are exactly the manifestations of climate change that we must get better at anticipating (Diffenbaugh et al., 2017). Society will have a hard time responding to shorter intervals between rare extreme events because in the lifespan of an individual human, a person might experience as few as two or three extreme events. How likely is it that you would notice a change in the interval between events that are separated by decades, especially given that the interval is not regular but varies stochastically? A concrete example of this dilemma can be found in the past and expected future changes in storm-related flooding of New York City. The highly disruptive flooding of New York City associated with Hurricane Sandy represented a flood height that occurred once every 500 years in the 18th century, and that occurs now once every 25 years, but is expected to occur once every 5 years by 2050 (Garner et al., 2017). This change in frequency of extreme floods has profound implications for the measures New York City should take to protect its infrastructure and its population, yet because of the stochastic nature of such events, this shift in flood frequency is an elevated risk that will go unnoticed by most people. 4. The combination of positive feedback loops and societal inertia is fertile ground for global environmental catastrophes **Humans** are remarkably ingenious, and **have adapted** to crises **throughout** their **history**. Our doom has been repeatedly predicted, only to be averted by innovation (Ridley, 2011). **However**, the many **stories** **of** human ingenuity **successfully** **addressing** **existential risks** such as global famine or extreme air pollution **represent** environmental c**hallenges that are** largely **linear**, have immediate consequences, **and operate without positive feedbacks**. For example, the fact that food is in short supply does not increase the rate at which humans consume food—thereby increasing the shortage. Similarly, massive air pollution episodes such as the London fog of 1952 that killed 12,000 people did not make future air pollution events more likely. In fact it was just the opposite—the London fog sent such a clear message that Britain quickly enacted pollution control measures (Stradling, 2016). Food shortages, air pollution, water pollution, etc. send immediate signals to society of harm, which then trigger a negative feedback of society seeking to reduce the harm. In contrast, today’s great environmental crisis of climate change may cause some harm but there are generally long time delays between rising CO2 concentrations and damage to humans. The consequence of these delays are an absence of urgency; thus although 70% of Americans believe global warming is happening, only 40% think it will harm them (http://climatecommunication.yale.edu/visualizations-data/ycom-us-2016/). Secondly, unlike past environmental challenges, **the Earth’s climate system is rife with positive feedback loops**. In particular, as CO2 increases and the climate warms, that **very warming can cause more CO2 release** which further increases global warming, and then more CO2, and so on. Table 2 summarizes the best documented positive feedback loops for the Earth’s climate system. These feedbacks can be neatly categorized into carbon cycle, biogeochemical, biogeophysical, cloud, ice-albedo, and water vapor feedbacks. As important as it is to understand these feedbacks individually, it is even more essential to study the interactive nature of these feedbacks. Modeling studies show that when interactions among feedback loops are included, uncertainty increases dramatically and there is a heightened potential for perturbations to be magnified (e.g., Cox, Betts, Jones, Spall, & Totterdell, 2000; Hajima, Tachiiri, Ito, & Kawamiya, 2014; Knutti & Rugenstein, 2015; Rosenfeld, Sherwood, Wood, & Donner, 2014). This produces a wide range of future scenarios. Positive feedbacks in the carbon cycle involves the enhancement of future carbon contributions to the atmosphere due to some initial increase in atmospheric CO2. This happens because as CO2 accumulates, it reduces the efficiency in which oceans and terrestrial ecosystems sequester carbon, which in return feeds back to exacerbate climate change (Friedlingstein et al., 2001). Warming can also increase the rate at which organic matter decays and carbon is released into the atmosphere, thereby causing more warming (Melillo et al., 2017). Increases in food shortages and lack of water is also of major concern when biogeophysical feedback mechanisms perpetuate drought conditions. The underlying mechanism here is that losses in vegetation increases the surface albedo, which suppresses rainfall, and thus enhances future vegetation loss and more suppression of rainfall—thereby initiating or prolonging a drought (Chamey, Stone, & Quirk, 1975). To top it off, overgrazing depletes the soil, leading to augmented vegetation loss (Anderies, Janssen, & Walker, 2002). Climate change often also increases the risk of forest fires, as a result of higher temperatures and persistent drought conditions. The expectation is that **forest fires will become more frequent** and severe with climate warming and drought (Scholze, Knorr, Arnell, & Prentice, 2006), a trend for which we have already seen evidence (Allen et al., 2010). Tragically, the increased severity and risk of Southern California wildfires recently predicted by climate scientists (Jin et al., 2015), was realized in December 2017, with the largest fire in the history of California (the “Thomas fire” that burned 282,000 acres, https://www.vox.com/2017/12/27/16822180/thomas-fire-california-largest-wildfire). This **catastrophic fire** embodies the sorts of positive feedbacks and interacting factors that **could catch humanity off-guard and produce a** true **apocalyptic event.** Record-breaking rains produced an extraordinary flush of new vegetation, that then dried out as record heat waves and dry conditions took hold, coupled with stronger than normal winds, and ignition. Of course the record-fire released CO2 into the atmosphere, thereby contributing to future warming. Out of all types of feedbacks, water vapor and the ice-albedo feedbacks are the most clearly understood mechanisms. Losses in reflective snow and ice cover drive up surface temperatures, leading to even more melting of snow and ice cover—this is known as the ice-albedo feedback (Curry, Schramm, & Ebert, 1995). As snow and ice continue to melt at a more rapid pace, millions of people may be displaced by flooding risks as a consequence of sea level rise near coastal communities (Biermann & Boas, 2010; Myers, 2002; Nicholls et al., 2011). The water vapor feedback operates when warmer atmospheric conditions strengthen the saturation vapor pressure, which creates a warming effect given water vapor’s strong greenhouse gas properties (Manabe & Wetherald, 1967). Global warming tends to increase cloud formation because warmer temperatures lead to more evaporation of water into the atmosphere, and warmer temperature also allows the atmosphere to hold more water. The key question is whether this increase in clouds associated with global warming will result in a positive feedback loop (more warming) or a negative feedback loop (less warming). For decades, scientists have sought to answer this question and understand the net role clouds play in future climate projections (Schneider et al., 2017). Clouds are complex because they both have a cooling (reflecting incoming solar radiation) and warming (absorbing incoming solar radiation) effect (Lashof, DeAngelo, Saleska, & Harte, 1997). The type of cloud, altitude, and optical properties combine to determine how these countervailing effects balance out. Although still under debate, it appears that in most circumstances the cloud feedback is likely positive (Boucher et al., 2013). For example, models and observations show that increasing greenhouse gas concentrations reduces the low-level cloud fraction in the Northeast Pacific at decadal time scales. This then has a positive feedback effect and enhances climate warming since less solar radiation is reflected by the atmosphere (Clement, Burgman, & Norris, 2009). The key lesson from the long list of potentially positive feedbacks and their interactions is that **runaway climate change,** and runaway perturbations have to be taken as a serious possibility. Table 2 is just a snapshot of the type of feedbacks that have been identified (see Supplementary material for a more thorough explanation of positive feedback loops). However, this list is not exhaustive and the possibility of undiscovered positive feedbacks **portends** even greater **existential risks**. The many environmental crises humankind has previously averted (famine, ozone depletion, London fog, water pollution, etc.) were averted because of political will based on solid scientific understanding. We cannot count on complete scientific understanding when it comes to positive feedback loops and climate change.

### 2

#### The standard is act hedonistic util. Prefer –

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

Blum et al. 18

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**Pleasure** is not only one of the three primary reward functions but it also **defines reward.** As homeostasis explains the functions of only a limited number of rewards, the principal reason why particular stimuli, objects, events, situations, and activities are rewarding may be due to pleasure. This applies first of all to sex and to the primary homeostatic rewards of food and liquid and extends to money, taste, beauty, social encounters and nonmaterial, internally set, and intrinsic rewards. Pleasure, as the primary effect of rewards, drives the prime reward functions of learning, approach behavior, and decision making and provides the **basis for hedonic theories** of reward function. We are attracted by most rewards and exert intense efforts to obtain them, just because they are enjoyable [10].

Pleasure is a passive reaction that derives from the experience or prediction of reward and may lead to a long-lasting state of happiness. The word happiness is difficult to define. In fact, just obtaining physical pleasure may not be enough. One key to happiness involves a network of good friends. However, it is not obvious how the higher forms of satisfaction and pleasure are related to an ice cream cone, or to your team winning a sporting event. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure [14].

Pleasure as a hallmark of reward is sufficient for defining a reward, but it may not be necessary. A reward may generate positive learning and approach behavior simply because it contains substances that are essential for body function. When we are hungry, we may eat bad and unpleasant meals. A monkey who receives hundreds of small drops of water every morning in the laboratory is unlikely to feel a rush of pleasure every time it gets the 0.1 ml. Nevertheless, with these precautions in mind, we may define any stimulus, object, event, activity, or situation that has the potential to produce pleasure as a reward. In the context of reward deficiency or for disorders of addiction, homeostasis pursues pharmacological treatments: drugs to treat drug addiction, obesity, and other compulsive behaviors. The theory of allostasis suggests broader approaches - such as re-expanding the range of possible pleasures and providing opportunities to expend effort in their pursuit. [15]. It is noteworthy, the first animal studies eliciting approach behavior by electrical brain stimulation interpreted their findings as a discovery of the brain’s pleasure centers [16] which were later partly associated with midbrain dopamine neurons [17–19] despite the notorious difficulties of identifying emotions in animals.

Evolutionary theories of pleasure: The love connection BO:D

Charles Darwin and other biological scientists that have examined the biological evolution and its basic principles found various mechanisms that steer behavior and biological development. Besides their theory on natural selection, it was particularly the sexual selection process that gained significance in the latter context over the last century, especially when it comes to the question of what makes us “what we are,” i.e., human. However, the capacity to sexually select and evolve is not at all a human accomplishment alone or a sign of our uniqueness; yet, we humans, as it seems, are ingenious in fooling ourselves and others–when we are in love or desperately search for it.

It is well established that modern biological theory conjectures that **organisms are** the **result of evolutionary competition.** In fact, Richard Dawkins stresses gene survival and propagation as the basic mechanism of life [20]. Only genes that lead to the fittest phenotype will make it. It is noteworthy that the phenotype is selected based on behavior that maximizes gene propagation. To do so, the phenotype must survive and generate offspring, and be better at it than its competitors. Thus, the ultimate, distal function of rewards is to increase evolutionary fitness by ensuring the survival of the organism and reproduction. It is agreed that learning, approach, economic decisions, and positive emotions are the proximal functions through which phenotypes obtain other necessary nutrients for survival, mating, and care for offspring.

Behavioral reward functions have evolved to help individuals to survive and propagate their genes. Apparently, people need to live well and long enough to reproduce. Most would agree that homo-sapiens do so by ingesting the substances that make their bodies function properly. For this reason, foods and drinks are rewards. Additional rewards, including those used for economic exchanges, ensure sufficient palatable food and drink supply. Mating and gene propagation is supported by powerful sexual attraction. Additional properties, like body form, augment the chance to mate and nourish and defend offspring and are therefore also rewards. Care for offspring until they can reproduce themselves helps gene propagation and is rewarding; otherwise, many believe mating is useless. According to David E Comings, as any small edge will ultimately result in evolutionary advantage [21], additional reward mechanisms like novelty seeking and exploration widen the spectrum of available rewards and thus enhance the chance for survival, reproduction, and ultimate gene propagation. These functions may help us to obtain the benefits of distant rewards that are determined by our own interests and not immediately available in the environment. Thus the distal reward function in gene propagation and evolutionary fitness defines the proximal reward functions that we see in everyday behavior. That is why foods, drinks, mates, and offspring are rewarding.

There have been theories linking pleasure as a required component of health benefits salutogenesis, (salugenesis). In essence, under these terms, pleasure is described as a state or feeling of happiness and satisfaction resulting from an experience that one enjoys. Regarding pleasure, it is a double-edged sword, on the one hand, it promotes positive feelings (like mindfulness) and even better cognition, possibly through the release of dopamine [22]. But on the other hand, pleasure simultaneously encourages addiction and other negative behaviors, i.e., motivational toxicity. It is a complex neurobiological phenomenon, relying on reward circuitry or limbic activity. It is important to realize that through the “Brain Reward Cascade” (BRC) endorphin and endogenous morphinergic mechanisms may play a role [23]. While natural rewards are essential for survival and appetitive motivation leading to beneficial biological behaviors like eating, sex, and reproduction, crucial social interactions seem to further facilitate the positive effects exerted by pleasurable experiences. Indeed, experimentation with addictive drugs is capable of directly acting on reward pathways and causing deterioration of these systems promoting hypodopaminergia [24]. Most would agree that pleasurable activities can stimulate personal growth and may help to induce healthy behavioral changes, including stress management [25]. The work of Esch and Stefano [26] concerning the link between compassion and love implicate the brain reward system, and pleasure induction suggests that social contact in general, i.e., love, attachment, and compassion, can be highly effective in stress reduction, survival, and overall health.

Understanding the role of neurotransmission and pleasurable states both positive and negative have been adequately studied over many decades [26–37], but comparative anatomical and neurobiological function between animals and homo sapiens appear to be required and seem to be in an infancy stage.

Finding happiness is different between apes and humans

As stated earlier in this expert opinion one key to happiness involves a network of good friends [38]. However, it is not entirely clear exactly how the higher forms of satisfaction and pleasure are related to a sugar rush, winning a sports event or even sky diving, all of which augment dopamine release at the reward brain site. Recent multidisciplinary research, using both humans and detailed invasive brain analysis of animals has discovered some critical ways that the brain processes pleasure.

Remarkably, there are pathways for ordinary liking and pleasure, which are limited in scope as described above in this commentary. However, there are **many brain regions**, often termed hot and cold spots, that significantly **modulate** (increase or decrease) our **pleasure or** even produce **the opposite** of pleasure— that is disgust and fear [39]. One specific region of the nucleus accumbens is organized like a computer keyboard, with particular stimulus triggers in rows— producing an increase and decrease of pleasure and disgust. Moreover, the cortex has unique roles in the cognitive evaluation of our feelings of pleasure [40]. Importantly, the interplay of these multiple triggers and the higher brain centers in the prefrontal cortex are very intricate and are just being uncovered.

Desire and reward centers

It is surprising that many different sources of pleasure activate the same circuits between the mesocorticolimbic regions (Figure 1). Reward and desire are two aspects pleasure induction and have a very widespread, large circuit. Some part of this circuit distinguishes between desire and dread. The so-called pleasure circuitry called “REWARD” involves a well-known dopamine pathway in the mesolimbic system that can influence both pleasure and motivation.

In simplest terms, the well-established mesolimbic system is a dopamine circuit for reward. It starts in the ventral tegmental area (VTA) of the midbrain and travels to the nucleus accumbens (Figure 2). It is the cornerstone target to all addictions. The VTA is encompassed with neurons using glutamate, GABA, and dopamine. The nucleus accumbens (NAc) is located within the ventral striatum and is divided into two sub-regions—the motor and limbic regions associated with its core and shell, respectively. The NAc has spiny neurons that receive dopamine from the VTA and glutamate (a dopamine driver) from the hippocampus, amygdala and medial prefrontal cortex. Subsequently, the NAc projects GABA signals to an area termed the ventral pallidum (VP). The region is a relay station in the limbic loop of the basal ganglia, critical for motivation, behavior, emotions and the “Feel Good” response. This defined system of the brain is involved in all addictions –substance, and non –substance related. In 1995, our laboratory coined the term “Reward Deficiency Syndrome” (RDS) to describe genetic and epigenetic induced hypodopaminergia in the “Brain Reward Cascade” that contribute to addiction and compulsive behaviors [3,6,41].

Furthermore, ordinary “liking” of something, or pure pleasure, is represented by small regions mainly in the limbic system (old reptilian part of the brain). These may be part of larger neural circuits. In Latin, hedus is the term for “sweet”; and in Greek, hodone is the term for “pleasure.” Thus, the word Hedonic is now referring to various subcomponents of pleasure: some associated with purely sensory and others with more complex emotions involving morals, aesthetics, and social interactions. The capacity to have pleasure is part of being healthy and may even extend life, especially if linked to optimism as a dopaminergic response [42].

Psychiatric illness often includes symptoms of an abnormal inability to experience pleasure, referred to as anhedonia. A negative feeling state is called dysphoria, which can consist of many emotions such as pain, depression, anxiety, fear, and disgust. Previously many scientists used animal research to uncover the complex mechanisms of pleasure, liking, motivation and even emotions like panic and fear, as discussed above [43]. However, as a significant amount of related research about the specific brain regions of pleasure/reward circuitry has been derived from invasive studies of animals, these cannot be directly compared with subjective states experienced by humans.

In an attempt to resolve the controversy regarding the causal contributions of mesolimbic dopamine systems to reward, we have previously evaluated the three-main competing explanatory categories: “liking,” “learning,” and “wanting” [3]. That is, dopamine may mediate (a) liking: the hedonic impact of reward, (b) learning: learned predictions about rewarding effects, or (c) wanting: the pursuit of rewards by attributing incentive salience to reward-related stimuli [44]. We have evaluated these hypotheses, especially as they relate to the RDS, and we find that the incentive salience or “wanting” hypothesis of dopaminergic functioning is supported by a majority of the scientific evidence. Various neuroimaging studies have shown that anticipated behaviors such as sex and gaming, delicious foods and drugs of abuse all affect brain regions associated with reward networks, and may not be unidirectional. Drugs of abuse enhance dopamine signaling which sensitizes mesolimbic brain mechanisms that apparently evolved explicitly to attribute incentive salience to various rewards [45].

Addictive substances are voluntarily self-administered, and they enhance (directly or indirectly) dopaminergic synaptic function in the NAc. This activation of the brain reward networks (producing the ecstatic “high” that users seek). Although these circuits were initially thought to encode a set point of hedonic tone, it is now being considered to be far more complicated in function, also encoding attention, reward expectancy, disconfirmation of reward expectancy, and incentive motivation [46]. The argument about addiction as a disease may be confused with a predisposition to substance and nonsubstance rewards relative to the extreme effect of drugs of abuse on brain neurochemistry. The former sets up an individual to be at high risk through both genetic polymorphisms in reward genes as well as harmful epigenetic insult. Some Psychologists, even with all the data, still infer that addiction is not a disease [47]. Elevated stress levels, together with polymorphisms (genetic variations) of various dopaminergic genes and the genes related to other neurotransmitters (and their genetic variants), and may have an additive effect on vulnerability to various addictions [48]. In this regard, Vanyukov, et al. [48] suggested based on review that whereas the gateway hypothesis does not specify mechanistic connections between “stages,” and does not extend to the risks for addictions the concept of common liability to addictions may be more parsimonious. The latter theory is grounded in genetic theory and supported by data identifying common sources of variation in the risk for specific addictions (e.g., RDS). This commonality has identifiable neurobiological substrate and plausible evolutionary explanations.

Over many years the controversy of dopamine involvement in especially “pleasure” has led to confusion concerning separating motivation from actual pleasure (wanting versus liking) [49]. We take the position that animal studies cannot provide real clinical information as described by self-reports in humans. As mentioned earlier and in the abstract, on November 23rd, 2017, evidence for our concerns was discovered [50]

In essence, although nonhuman primate brains are similar to our own, the disparity between other primates and those of human cognitive abilities tells us that surface similarity is not the whole story. Sousa et al. [50] small case found various differentially expressed genes, to associate with pleasure related systems. Furthermore, the dopaminergic interneurons located in the human neocortex were absent from the neocortex of nonhuman African apes. Such differences in neuronal transcriptional programs may underlie a variety of neurodevelopmental disorders.

In simpler terms, the system controls the production of dopamine, a chemical messenger that plays a significant role in pleasure and rewards. The senior author, Dr. Nenad Sestan from Yale, stated: “Humans have evolved a dopamine system that is different than the one in chimpanzees.” This may explain why the behavior of humans is so unique from that of non-human primates, even though our brains are so surprisingly similar, Sestan said: “It might also shed light on why people are vulnerable to mental disorders such as autism (possibly even addiction).” Remarkably, this research finding emerged from an extensive, multicenter collaboration to compare the brains across several species. These researchers examined 247 specimens of neural tissue from six humans, five chimpanzees, and five macaque monkeys. Moreover, these investigators analyzed which genes were turned on or off in 16 regions of the brain. While the differences among species were subtle, **there was** a **remarkable contrast in** the **neocortices**, specifically in an area of the brain that is much more developed in humans than in chimpanzees. In fact, these researchers found that a gene called tyrosine hydroxylase (TH) for the enzyme, responsible for the production of dopamine, was expressed in the neocortex of humans, but not chimpanzees. As discussed earlier, dopamine is best known for its essential role within the brain’s reward system; the very system that responds to everything from sex, to gambling, to food, and to addictive drugs. However, dopamine also assists in regulating emotional responses, memory, and movement. Notably, abnormal dopamine levels have been linked to disorders including Parkinson’s, schizophrenia and spectrum disorders such as autism and addiction or RDS.

Nora Volkow, the director of NIDA, pointed out that one alluring possibility is that the neurotransmitter dopamine plays a substantial role in humans’ ability to pursue various rewards that are perhaps months or even years away in the future. This same idea has been suggested by Dr. Robert Sapolsky, a professor of biology and neurology at Stanford University. Dr. Sapolsky cited evidence that dopamine levels rise dramatically in humans when we anticipate potential rewards that are uncertain and even far off in our futures, such as retirement or even the possible alterlife. This may explain what often motivates people to work for things that have no apparent short-term benefit [51]. In similar work, Volkow and Bale [52] proposed a model in which dopamine can favor NOW processes through phasic signaling in reward circuits or LATER processes through tonic signaling in control circuits. Specifically, they suggest that through its modulation of the orbitofrontal cortex, which processes salience attribution, dopamine also enables shilting from NOW to LATER, while its modulation of the insula, which processes interoceptive information, influences the probability of selecting NOW versus LATER actions based on an individual’s physiological state. This hypothesis further supports the concept that disruptions along these circuits contribute to diverse pathologies, including obesity and addiction or RDS.

#### 2 – No intent-foresight distinction – if I foresee a consequence, then it becomes part of my deliberation since its intrinsic to my action

#### 3 – Actor spec – governments lack wills or intentions and inevitably deals with tradeoffs – outweighs because agents have differing obligations.

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

#### 6] Theoretically: ethical frameworks must be theoretically legitimate – fair like any other argument. Prefer my interpretation (util) – A] Ground: Both debaters are guaranteed access to ground to engage under util – ie Aff gets plans and advantages, while Neg gets disads and counterplans. Additionally, anything can function as a util impact, so all your offense applies. B] resolvability – only util can compare and choose between two different types of impacts – anything else forces judge intervention which takes the debate out of the debaters hands.

#### Extinction first –

#### 1 – Forecloses future improvement – we can never improve society because our impact is irreversible

#### 4 – Objectivity – body count is the most objective way to calculate impacts because comparing suffering is unethical

#### 5 – Moral uncertainty – if we’re unsure about which interpretation of the world is true – we ought to preserve the world to keep debating about it

### Case

### WTO ADV

#### Low WTO causes regional trade – yes trade-off

Isfeld 14 Gordon Isfeld 3-17-2014 business.financialpost.com/2014/03/17/with-rise-of-shot-gun-trade-agreements-is-the-wto-even-relevant-anymore/ “With the rise of 'shot-gun' trade agreements, is the WTO even relevant anymore” //Elmer

OTTAWA — It’s getting awfully crowded out there in the free-trading world. The seemingly endless hunt for new global partners is redefining the traditional and hard-fought rules of engagement between nations. So much so, observers say, the old world order — remember the WTO, and GATT before it — has increasingly become a sideshow to the proliferation of bilateral, **trilateral** **and**, often, **multi-lateral** agreements. Even the term “free trade” no longer accurately describes the “new world” of negotiations — one that encompasses far more than what and how products are permitted to slide under domestic tariff radars. For Canada, we can now add South Korea and the European Union — deals long in the making but only weeks in the signing — after a string of minor agreements since the landmark free trade act 25 years ago with the United States, and later to include Mexico. Now, as the growing mass of country-to-country, region-to-region agreements has made apparent, it’s open season on anything that moves between borders — not only products, investments and intellectual property, but also new rules on competition, and the inclusion of labour laws and environmental guidelines. These are just some of the areas of possible disputes that the World Trade Organization “does not deal with,” said Debra Steger, a professor of law at University of Ottawa, specializing in international trade and development. “These are new models. These are not traditional trade agreements, per se.” Ms. Steger, who worked for the federal government on the Uruguay Round of negotiations that led to formation of the WTO, said the framework of recent deals goes “way beyond subjects that NAFTA dealt with.” “Trade, even in the WTO, isn’t only about tariffs. It’s not just about customs and border measures,” she said. “But it’s not about behind-the-border regulatory matters, like environmental regulation and labour standards, competition policy and human rights, corruption, and on and on it goes.” Free trade, between where ever, has become the go-to issue for politicians, business leaders, public-policy makers and private interest groups. Note, this month’s sudden but long-rumoured announcement by the Harper government of a free-trade deal with South Korea, nearly 10 years after talks began and stumbled, and resumed again. Arguably, the deal was finally done as a result of the resolution to Canada’s drawn-out dispute with Seoul over our beef exports — the so-called “mad cow” disease leading to a ban in that county and others. Of course, the United States, the European Union and Australia, among others, already had agreements in hand with South Korea. A few months earlier, Ottawa inked its EU deal — the Comprehensive Economic and Trade Agreement — which was again the outcome of a seemingly endless circle of negotiations that still left Canada trailing similar pacts by the U.S. and others. Even so, these pacts “affect the WTO and WTO negotiations for a number of reasons. That’s a major problem,” said Ms. Steger. “The major developed countries have gone off and started these efforts to negotiate these big FTAs [free trade agreements] as a response to the declining situation in the Doha Round. The WTO — reborn in 1995 out of the General Agreement and Tariffs and Trade, the original body created in 1948 — has been struggling to maintain its relevance as the global arbiter of trade agreements and dispute resolution. The cachet of the 159-member body, however, has been diminished in recent years as countries moved to seal their own free-trade deals with major partners in the absence, some would argue, of any significant movement by the WTO on its own 2001 trade liberalization initiative, launched in Doha, Qatar. Late last year, members managed to agree to only limited movement on trade under the Doha Round of talks. Even now, details remain to be worked out. “One of the reasons why we’re seeing this sort of shot-gun approach [to trade agreements outside of the WTO] is because a number of countries are concerned that the big global deals are probably next to impossible at this stage, given how the Doha Round went and what we ended up with there, which was next to nothing,” said Douglas Porter, chief economist at BMO Capital Markets in Toronto. “They did manage to reach a tiny deal when all was said and done, but it was very modest in terms of its scope.” The move toward bilateral or multi-lateral agreements “is a symptom of the problems that we were running into at the WTO,” Mr. Porter said. “Important players are probably quietly questioning the future for the WTO…. Is it that death knell for the WTO? I don’t think so. [But] it just means we might not be able to accomplish grand, global deals in the future.” However, “there’s really no other way to approach trade disputes with, say, a country like China, then through that body at this point.” “Even 10 years ago, I think it was more straightforward to come to global trade rules. You had two major players, Europe and the U.S., and a few next tier players, including Japan,” Mr. Porter said. “Now, though, you have all kinds of important big players that have a huge chunk of global trade, and have very different goals and aims, and it might be the nature of the global economy now — the reality that we have many different groups in many different regions. “It might be impossible to square that circle.” Over the course of 25 years, Canada has piled on more than a dozen free trade agreements. The first — taking effect on Jan. 1, 1989 — was with the United States. A heated political issue in the 1988 federal election, which Brian Mulroney’s Conservatives won, the FTA was expanded in 1994 to include Mexico and rebranded as NAFTA. Other free trade deals, though much smaller, were signed in subsequent years, some yet to take effect: Israel, Jordan and Chile, followed later by Costa Rica, Peru, Panama, Honduras and Colombia, leading up to the pacts with EU and South Korea. Negotiations are ongoing for at least another dozen agreements. For countries such as Colombia, which has had an agreement in effect with Canada since 2011, the goal is “to insert our economy into the world economy,” said Alvaro Concha, trade commissioner of Proexport Colombia, based in Toronto. “At the beginning of this decade, we had only our preferential access to over 500 million consumers,” Mr. Concha said. “With all the potential FTAs we’ve been signing with potential markets and with potential partners, we believe that not just the potential buyers of our products, but also the potential investors in our country, we have opened our preferential access to over 1.5 billion consumers.” Likely to push the WTO further into the shadows of global trade will be the Trans Pacific Partnership. “In many ways, the Trans Pacific Partnership will be, if it is successful, an updating of the NAFTA, because the U.S. and Mexico are involved, as well as some [trading] partners we already have within Latin America, like Peru,” said Ms. Steger, at the University of Ottawa. “But [there are] also some key countries in Asia that we don’t have agreements with yet. And some other developed countries in that regional, New Zealand and Australia, that we don’t have agreements with,” she adds. “So that [TPP] agreement is very, very important. It’s also the first major plur-lateral agreement that the world has seen.”

#### Regionalism promotes trade and stops war – avoids their impact because our regionalism is different than protectionist blocs.

Brkić 13, Snježana, and Adnan Efendic. "Regional Trading Arrangements–Stumbling Blocks or Building Blocks in the Process of Global Trade Liberalization?." 5th International Conference «Economic Integration, competition and cooperation», Croatia, Opatija. 2013. papers.ssrn.com/sol3/papers.cfm?abstract\_id=2239275 (Economics Prof at U of Sarajevo) //Elmer

Besides those advocating the optimistic or pessimistic view on regionalism effect on global trade liberalization, some economists, such as Frankel and Wei, hold a neutral position, in a way. Frankel and Wei believe that forms and achievements of international economic integrations can vary and that, for this reason, regionalism can be – depending on circumstances – linked to greater or smaller global trade liberalization. In the years-long period of regional integration development, four periods have been identified during which the integration processes were becoming particularly intensive and which have therefore been named "waves of regionalism". The first wave was taking place during the capitalism development in the second half of the 19th century, in the course of British sovereign domination over the world market. Economic integrations of the time primarily had the form of bilateral customs unions; however, owing to the comparative openness of international trading system based on the golden standard automatism, this period is called the "era of progressive bilateralism". The next two waves of **regionalism** occurred in the years following the world wars. Since the disintegration processes caused by the wars usually spawned economic nationalisms and autarchic tendencies, it is not surprising that post-war regionalisms were marked by discriminatory international economic integrations, primarily at the level of so-called negative integration, with expressedly “beggar-thy-neighbor” policies that resulted in considerable trade deviations. This particularly refers to the regionalism momentum after the First World War, which was additionally burdened by the consequences of Big Economic Crisis. The current wave of regionalism started in late 1980s and spread around the world to a far greater extent than any previous one did: it has covered almost all the continents and almost all the countries, even those which have mis to join all earlier regional initiatives, such as the USA, Canada, Japan and China. Integration processes, however, do not show any signs of flagging. Up till now, over 200 RTAs have been registered with GATT/WTO, more than 150 of them being still in force, and most of these valid arrangement have been made in the past ten years. Specific in many ways, this wave was dubbed "new regionalism". The most specific **characteristics** of new regionalism **include: geographic spread** **of RTAs** **in** terms of **encompassing entire continents;** **greater speed**; integration forms success; deepening of integration processes; **and**, the most important for this theoretical discussion, generally **non-negative impact on outsiders, world economy as a whole, and** the **multilateral liberalization** process. Some theorists (Gilpin) actually distinguish **between** the "**benign**" **and** "**malign**" **regionalism**. On the one hand, **regionalism can advance** the **international economic stability**, multilateral liberalization **and world peace**. On the other, it can have mercantilist features leading to economic well-being degradation and increasing international tensions and conflicts. Analyses of trends within the contemporary integration processes show that they mainly have features of "benign" regionalism. Reasons for this are numerous. **Forces driving** the **contemporary** **regionalism** development **differ from** those that used to drive **earlier** regionalism periods in the 20th century. The **present regionalism emerged in** the period characterized by the **increasing economic inter-dependence** between different world economy subjects, countries attempts to resolve trade disputes and multilateral framework of trade relations. As opposed to the 1930s episode, contemporary regional initiatives represent **attempts to make** the members' **participation in the world economy easier**, rather than make them more distant from it. As opposed to 1950s and 1960s episode, new **initiatives** are **less frequently motivated** **exclusively by political interests**, and are **less frequently** being used **for mercantilist purposes**. After the Second World War, more powerful countries kept using the economic integration as a means to strengthen their political influence on their weaker partners and outsiders. The examples include CMEA and European Community arrangements with its members' former colonies. As opposed to this practice, the new regionalism, mostly driven by common economic interests, yielded less trade diversion than previous one, and has also **contributed to** the **prevention of military conflicts of greater proportions**. Various analyses have shown that many regional integrations in earlier periods resulted in trade deviations, particularly those formed between less developed countries and between socialist countries. In recent years, however, the newly formed or revised regional **integrations** primarily seem to **lead to trade creation**. Contrary to the “beggar thy- neighbor” model of former international economic integrations, the integrations now offer certain advantages to outsiders as well, by stimulating growth and spurring the role of market forces. The analyses of contemporary trends in world economy also speak in favor of the "optimistic" proposition. The structural analysis shows that the world trade is growing and that this growth results both from the increase in intra-regional and from the increase in extra-regional trade value (Anderson i Snape 1994.)28. Actually, the intraregional trade has been growing faster, both by total value and by its share in world GDP. The extra-regional trade share in GDP was increasing in some regions – in North America, Asia-Pacific and Asian developing countries. However, the question arises as to whether the extra-regional trade would be greater without regional integrations or not? The answer would primarily depend both on the estimate of degree of some countries' trade policy restrictedness in such circumstances, and on factors such as geographic distance, transport communications, political relations among states. One should also take into account certain contemporary integration features – the primarily economic, rather than strategic motivation, and continuous expansion, which mostly includes countries that are significant economic partners. With respect to NAFTA, many believe that the negative effects on outsiders will be negligible, since the USA and Canada have actually been highly integrated economies for a long time already, while the Mexican economy is relatively small. The same view was pointed out by the EU, with respect to its expansion. It particularly refers to the inclusion of the remaining EFTA countries, because this will actually only complete, in institutional terms, the EU strong economic ties with these countries. Most EFTA countries have been part of the European economic area (EEA), i.e. the original EC-EFTA agreement, for a few years already, and conduct some 70% of their total international exchange with the Union countries. EU countries are also the most significant foreign-trade partners of Central and East Europe countries, and the recent joining the Union of several of them is not expected to cause a significant trade diversion. Besides, according to some earlier studies, during the previous wave of regionalism, in the 1967-70 period, the creation of trade in EEC was far greater than trade diversion: trade creation ranged from 13 to 23% of total imports, while trade diversion ranged from 1 to 6%. In Latin America, the new regionalism resulted in the faster growth of intra-regional trade, while the extra-regional exports and imports also continued to grow. Since early 1990s, the value of intra-regional imports registered the average annual growth of 18%. In the same time, the extra-regional exports were also growing, although at a lower rate of 9% average a year; its share in the total Latin America exports at the end of decade amounted to 18% as compared to 12% in 1990. In the 1990-1996 period, the intraregional imports grew by some 18% a year. The extra-regional imports were also growing very fast, reaching the 14% rate. These data reflect a great unbalance in the trade with extra-regional markets, since the imports from countries outside the region grew much faster the exports.30 Since the described trends point to the continued growth of extra-regional imports and exports, they also show that regional integration in Latin America has had the open regionalism character. Besides, the pending establishment of FTAA – Free Trade Area of Americas will gather, in the same group, the so-called "natural" trade partners – countries that have had an extremely extensive mutual exchange for years already, and the outsiders are therefore unlikely to be affected by strengthening of regionalism in this part of the world. Contemporary research shows that intra-regional trade is growing, however, same as interdependence between North America and East Asia and between the EU and East Asia. It can also be seen that the biggest and the **most powerful** countries, i.e. **blocs**, **are extremely dependent** **on the rest of the world in terms of trade.** For the EU, besides the intra-European trade, which is ranked first, foreign trade has the vital importance since it accounts for 10% of European GDP. In early 1990s, EU exchanged 40% of its foreign trade with non-members, 16% out of which with North America and East Asia together. EU therefore must keep in mind the rest of the world as well. The growing EU interest in outsiders is confirmed by establishing "The Euro-Med Partnership", which proclaimed a new form of cooperation between the EU and the countries at its South periphery32. Besides, the past few years witnessed a series of inter-regional agreements between the EU on the one hand, and certain groups from other regions on the other (MERCOSUR, CARICOM, ASEAN and GCC). In case of North America the ratio between intra-regional and inter-regional trade is 40:60, and in East Asia, it is 45:55. Any attempt to move towards significantly closed blocs ("fortresses") would require overcoming the significant inter-dependence between major trading blocs. Besides the analysis of contemporary trends in extra- and intra-regional trade, other research was conducted that was supposed to point to the reasons why the **new regionalism has** mainly a **non-negative impact on** outsiders and **global liberalization**. The distinctive features of new regionalism were also affected to characteristics of international economic and political environment it sprouted in. In the 1980s, economic nationalisms were not so expressed as in the interventionism years following the Second World War; however, the neo-liberalism represented by GATT activities did not find the "fertile ground” in all parts of the world. Regionalism growth in the circumstances of multilateral system existence is, among other things, the consequence of distrust in multilateralism. „The revival of the forces of regionalism stemmed from frustration with the slow pace of multilateral trade liberalization... If the world trade regime could not be moved ahead, then perhaps it was time for deeper liberalization within more limited groups of like-minded nations... Such efforts would at least liberalize some trade... and might even prod the other nations to go along with multilateral liberalization.“33 Kennedy's round and Tokyo round of trade negotiations under GATT auspices brought a certain progress in the global trade liberalization. However, the 1980s witnessed significant changes in the world economy that the GATT trade system was not up to. Besides. GATT had not yet managed to cover the entire trade in goods, since there were still exceptions in the trade in agricultural and textile products that particularly affected the USA and developing countries. GATT system of conflict resolutions, and its organizational and administrative mechanism in general also required revision. In this vacuum that was created in promoting trade and investment multilateralism from the point when GATT inadequacy became obvious until the start of the Uruguay round and the establishment of World Trade Organization, the wave of regionalism started spreading across the world again. Prodded by the Single European Act and the success of European integration, many countries turned to an alternative solution – establishment of new or expansion and deepening of the existing economic integrations. Even the USA, the multilateralism bastion until then, made a radical turn in their foreign-trade policy and started working on designing a North American integration.

#### That outweighs—multilateral trade causes wars with a larger impact

Thoma 7 Mark Thoma July 2007 “Trade Liberalization and War” <http://economistsview.typepad.com/economistsview/2007/07/trade-liberaliz.html> (Economics Professor at the University of Oregon)//Elmer

Globalisation is by construction an increase in both bilateral and multilateral trade flows. What then was the net effect of increased trade since 1970? We find that it **generated an increase in the probability of a bilateral conflict by** around **20%** for those **countries separated by less than 1000kms,** the group of countries for **which the risk of disputes that can escalate militarily is the highest.** The effects are much smaller for countries which are more distant. Contrary to what these results (aggravated by our nationality) may suggest, we are not anti-globalisation activists even though we are aware that some implications of our work could be (mis)used in such a way. The result that bilateral trade is pacifying brings several more optimistic implications on globalisation. First, if we think of a world war as a war between two large groups or coalitions of countries, then globalisation makes such a war less likely because it increases the opportunity cost of such a conflict. Obviously, this conclusion cannot be tested but is a logical implication of our results. From this point of view, our work suggests that globalisation may be at the origin of a change in the nature of conflicts, less global and more local. Second, our results do confirm that increased trade flows **created by regional trade agreements** (such as the EU) are indeed **pacifying** as intended. Given that most military conflicts are local, because they find their origins in border or ethnic disputes, **this is not a small achievement**. These beneficial political aspects of regional trade agreements are not usually considered by economists who often focus on the economic distortions brought by their discriminatory nature. Given the huge human and economic costs of wars, this political effect of regional trade agreements should not be discounted. This opens interesting questions on how far these regional trade agreements should extend – a topical issue in the case of the EU. The entry of Turkey in the EU would indeed pacify its relations with EU countries (especially Greece and Cyprus), but also increase the probability of a conflict between Turkey and its non-EU neighbours. However, our simulations suggest that in this case, the first effect dominates the second by a large margin. More generally, our results should be interpreted as a word of caution on some political aspects of globalisation. As it proceeds and weakens the economic ties of proximate countries, those with the highest risk of disputes that can escalate into military conflicts, local conflicts may become more prevalent. Even if they may not appear optimal on purely economic grounds, regional and bilateral trade agreements, by strengthening local economic ties, may therefore **be a necessary political counterbalance to economic globalisation**.

### China ADV

#### 1] Non-Unique Status Quo solves it – Biden cranked up Vaccine Diplomacy in the wake of China’s Failures – this also answers their China Rise U/Q

Wee and Lee 8-20 Sui-Lee Wee and Steven Lee Myers 8-20-2021 "As Chinese Vaccines Stumble, U.S. Finds New Opening in Asia" https://www.nytimes.com/2021/08/20/business/economy/china-vaccine-us-covid-diplomacy.html (Sui-Lee Wee is a China correspondent for The New York Times. She was part of the team that won the 2021 Pulitzer in public service for coverage of the coronavirus pandemic)//Elmer

SINGAPORE — The arrival of the **Chinese vaccines** was supposed to help stop the spread of the coronavirus in Southeast Asia. Instead, **countries** across the region are **quickly turning elsewhere** to look for shots. Residents in Thailand vaccinated with one dose of China’s Sinovac are now given the AstraZeneca shot three to four weeks later. In Indonesia, officials are administering the Moderna vaccine as a booster to health care workers who had received two doses of Sinovac. Malaysia’s health minister said the country would stop using Sinovac once its supply ran out. Even Cambodia, one of China’s strongest allies, has started using AstraZeneca as a booster for its frontline workers who had taken the Chinese vaccines. Few places benefited from China’s vaccine diplomacy as much as Southeast Asia, a region of more than 650 million that has struggled to secure doses from Western drugmakers. Several of these countries have recorded some of the fastest-growing number of cases in the world, underscoring the desperate need for inoculations. China, eager to build good will, stepped in, promising to provide more than 255 million doses, according to Bridge Consulting, a Beijing-based research company. Half a year in, however, that campaign has lost some of its luster. Officials in several countries have raised doubts about the efficacy of Chinese vaccines, especially against the more transmissible Delta variant. Indonesia, which was early to accept Chinese shots, was recently the epicenter of the virus. Others have complained about the conditions that accompanied Chinese donations or sales. The setback to China’s vaccine campaign has created a diplomatic opening for the United States when relations between the two countries are increasingly fraught, in part because of the coronavirus. China has criticized the American handling of the crisis at home and even claimed, with no evidence, that the pandemic originated in a military lab at Fort Detrick, Md., not in Wuhan, where the first cases emerged in late 2019. **As more countries turn away from Chinese shots**, **vaccine aid from the U**nited **S**tates **offers** an **opportunity to restore relations** **in a region that** American officials **have** mostly **ignored for years while China extended its influence**. The **Biden** administration has **dispatched** a crowd of **senior officials,** including Vice President Kamala Harris, who is scheduled to arrive on Sunday to visit Singapore and Vietnam. It has **also**, at last, **made its own vaccine pledges to Southeast Asia**, **emphasizing** that the **American contribution of** roughly **23 million shots** as of this week **comes with “no strings attached,”** an implicit reference to China. **Several countries** in the region have been **eager to receive** the **more effective, Western doses.** Although they remain far outnumbered by Chinese shots, they present an attractive alternative. China’s “early head-start advantage has lost its magic already,” said Hoang Thi Ha, a researcher with the Asean Studies center of the ISEAS-Yusof Ishak Institute in Singapore. For most of the year, many developing countries in Southeast Asia did not have much of a choice when it came to vaccines. They struggled to acquire doses, many of which were being made by richer nations that have been accused of hoarding them. China sought to fill those needs. The country’s foreign minister, Wang Yi, traveled through the region in January, promising to help fight the pandemic. In April, he declared that Southeast Asia was a priority for Beijing. About a third of the 33 million doses that China has distributed free worldwide were sent to the region, according to the figures provided by Bridge Consulting. Much of Beijing’s focus has been directed at the more populous countries, such as Indonesia and the Philippines, and its longstanding allies like Cambodia and Laos. Indonesia was China’s biggest customer in the region, buying 125 million doses from Sinovac. The Philippines obtained 25 million Sinovac shots after the president, Rodrigo Duterte, said he had turned to Xi Jinping, China’s top leader, for help. Cambodia received more than 2.2 million of China’s Sinopharm doses. It has inoculated roughly 41 percent of its population, achieving the second-highest vaccination rate in the region, after Singapore. Then, signs started emerging that the Chinese vaccines were not as effective as hoped. Indonesia found that 10 percent of its health care workers had become infected with Covid-19 as of July, despite being fully vaccinated with the Sinovac shot, according to the Indonesian Hospital Association. In July, a virologist at Chulalongkorn University in Bangkok said a study of people who had received two doses of the Sinovac vaccine showed that their level of antibodies, 70 percent, was “barely efficacious” against the Alpha variant of the coronavirus, first detected in Britain, or against the Delta variant, first detected in India. The governments in both Indonesia and Thailand decided that they had to make a switch to other vaccines, like those provided by the United States, Britain and Russia. “Now that they have more choices, they can make other decisions,” said Nadège Rolland, senior fellow at the National Bureau of Asian Research in Washington. “I don’t think it’s politically motivated. I think it’s pragmatic.” Yaowares Wasuwat, a noodle seller in Thailand’s Bangsaen Chonburi Province, said that she hoped to get the AstraZeneca vaccine for her second shot after being inoculated with Sinovac, but that she would take whatever was available. “I have nothing to lose,” she said. “The economy is so bad, we are gasping for air. It’s like dying while living, so just take whatever protection we can.” China’s early moves in the region stand in marked contrast with the United States, which was **slow to provide assistance**. The calculus **has now changed** under President Biden. Both Lloyd J. Austin III, the American secretary of defense, and Antony J. Blinken, the secretary of state, had meetings with top officials in Southeast Asia in recent weeks. They **noted** the **donations of roughly 20 million shots**. After Mr. Austin visited the Philippines, Manila restored a defense agreement that had been stuck in limbo for more than a year after Mr. Duterte threatened to terminate it. The agreement, which would continue to allow American troops and equipment to be moved in and out of the Philippines, could thwart China’s goal to push the American military out of the region.

#### Pre-empting the 1AR push on Latin America Key to LIO – this card doesn’t say it so don’t give it to them – Southeast Asia is more important to check back China’s rise since it’s in China’s own backyard.

#### Biden is shipping Vaccines to Latin America – post-dates yours by a Month.

Gramer 7-9 Robbie Gramer 7-9-2021 "U.S. Blunts China's Vaccine Diplomacy in Latin America" <https://archive.is/IGWnF#selection-1029.0-1069.263> (diplomacy and national security reporter at Foreign Policy.)//Elmer

The **U**nited **S**tates is **ramping up** the delivery of **coronavirus vaccines to Latin America** in a move aimed at addressing the region’s public health crisis, but the **endeavor could** also **curb China’s efforts to wield its vaccine exports for geopolitical influence.** U.S. President Joe Biden declared the United States would **export** up to **80 million vaccines** to other countries, and in recent weeks, his administration announced a slew of deliveries to countries in Central and South America—including initial shipments of 2.5 million vaccine doses to Colombia, 2 million doses to Peru, 3 million doses to Brazil, 1 million doses to Paraguay, 1.5 million doses to Honduras, and 1.35 million doses to Mexico. The flurry of announcements **signal** the **U**nited **S**tates is **turning a corner in vaccine diplomacy in Latin America** after lagging behind both Russia and China for months in early vaccine exports to the region. “All in, when you look at what the United States has been sharing, Latin America has been by far the largest beneficiary. And this is just the beginning,” said Juan Gonzalez, senior director for the Western Hemisphere on the White House National Security Council.

#### 2] Non-Unique – Biden already endorsed the COVID waiver – demonstrating that he’s willing to restore American Humanitarian Leadership – no evidence assuming the distinction.

#### 3] Turn – LISTEN this Aff is not Vaccine Diplomacy – Vaccine Diplomacy is hoarding production in one country then distributing it to other countries so they are reliant on a Country which establishes diplomatic ties, the Affs thesis is off-shoring Vaccine Production to other countries so they’re no longer reliant on the US since they can produce Vaccines themselves – here’s the ending of 1AC Carlman and Carl

1AC Carman and Carl 6-15 Ezequiel Carman and Joseph Carl 6-15-2021 "A U.S. vaccine diplomacy strategy for Latin America and the Caribbean" <https://theglobalamericans.org/2021/06/a-u-s-vaccine-diplomacy-strategy-for-latin-america-and-the-caribbean/> (Ezequiel Carman is an Argentine lawyer and global health and trade policy consultant. Previously, he served as a legal advisor to the Ministry of Justice of Buenos Aires, an assistant professor of international public law at the Universidad Católica Argentina, and a research assistant at the O’Neill Institute for National and Global Health Law. Joseph Carl is a graduate of Liberty University, where he studied international relations and strategic international studies. He has worked for the U.S. Department of State and the Heritage Foundation.)//re-cut by Elmer

A forward-thinking strategy To this point, the U.S. has been significantly outpaced by China and Russia when it comes to building and strengthening relations with its Latin American and Caribbean neighbors. The dynamic surrounding COVID-19 vaccine distribution is evocative of another era of recent history when the U.S. abandoned the suffering of the developing world for the sake of profit-maximizing pharmaceutical companies. With Latin America and the Caribbean being the region hardest hit in the world by the COVID-19 pandemic—much as Africa was at the height of the AIDS pandemic—the U.S. is only undermining its moral standing and regional influence by failing to more readily extend a helping hand. As the war against COVID-19 reaches a détente in the U.S., the Biden administration should make this issue a top priority. First, the U.S. needs to aggressively push its Western partners to back the IP patent waiver at the WTO in order to push forward a patent proposal that will help increase vaccine production capacity worldwide. Doing so will demonstrate to the world that Washington has the political will to defy the wishes of the powerful pharmaceutical industry and and re-establish its leadership role among the Western powers. Second, **in order to counter its** **geopolitical rivals** and restore its moral standing, the **Biden** administration **will need to be more “present” in** regional vaccine distribution, demonstrated through a vigorous campaign of **public diplomacy**. Unlike their American counterparts, Chinese and Russian diplomatic officials are always present whenever a new shipment of their vaccines enter a given country. These arrivals have frequently been met with fanfare and attention from the Latin American press—coverage that, in turn, helps to shape public opinion regarding Sino-Russian influence and elevate the political stature of the two revisionist powers among the Latin American electorate. **Adopting this strategy would help convey the message that vaccines are coming from the American people**, **rather than from faceless multinational corporations**, and help rebuild moral standing for the U.S. among Latin American and Caribbean citizenries. **Public-private partnerships** with these companies would allow the U.S. to obtain more accountability with respect to international vaccine distribution; previous agreements have proven successful in achieving similar public perceptions of transparency and accountability. Finally, **Washington needs to ramp up its vaccine donations to countries** in Latin America and the Caribbean, prioritizing the distribution of Johnson & Johnson (J&J) and AstraZeneca doses for the sake of efficiency and efficacy. (Pfizer and Moderna’s vaccines require expensive cold chain infrastructure for their transport, the capacity for which many regional providers lack.) A prompt, strong showing of U.S. leadership in each of these areas will undoubtedly help boost Washington’s moral standing and counter rival influences in Latin America and the Caribbean.