

The “Vaccine Genocide” of Indigenous Nations and Peoples: The Intellectual Property (IP¹) Regime, “Vaccine Apartheid” and “Vaccine Untouchables”

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ABSTRACT

The first section of this essay examines the recent emergence of the “vaccine apartheid” system produced by the collaboration of North Atlantic States’ intellectual property (IP) regime, monopoly capitalism, and powerful international organizations such as the World Trade Organization (WTO) and transnational drug conglomerates. The second section elaborates on the perilous impact of “vaccine apartheid,” including the creation of so-called “vaccine untouchables” composed of indigenous peoples around the globe who have been largely shut off from the medical and scientific benefits of vaccination.² The presence of this “disposable” population serves to ensure continually emerging forms of new virus variants, thereby creating a potential market for further vaccine production and the maximization of future corporate profits. The third section explores the possibility of sharing vaccine recipes and developing globalized vaccine production as a viable strategic alternative to the IP regime, thereby leading to the eradication of “vaccine apartheid” and the vilified presence of “vaccine untouchables.” While innovative mRNA vaccines were largely developed by publicly funded research in North Atlantic states, the profit deriving from medical innovations has been privatized through the state-corporate collaboration. This section also examines the efforts by socialist states, including Cuba and others, to develop their own vaccines, make vaccine recipes available, and produce them for a global vaccination effort, involving indigenous peoples around the world. The fourth and final section summarizes strategies to help prevent recurrences of “vaccine genocide” in relation to indigenous peoples. Since nearly 80% of the earth’s biodiversity remains in indigenous homelands, it is vital that states and corporations cultivate close collaborative relations with indigenous peoples around the globe to prevent further destruction of biodiversity and natural ecology, thus eliminating the likelihood of future zoonotic virus pandemics and their deadly consequences.³

¹ It is common to abbreviate “intellectual property” as “IP” and the author does apply this practice here. “IP” is sometimes also associated with “indigenous peoples” but that is how the abbreviation is used in this essay.

² Sirleaf, “Disposable.”

Keywords: intellectual Property, product patents, multinational corporations, COVID-19, disarticulation of production

On August 9, 2021, after a great many pandemic deaths occurred due to the spread of the COVID-19 virus in the Amazon region, Brazil's indigenous peoples filed a request with the International Criminal Court (ICC) to investigate Brazilian President Jair Bolsonaro alleging genocide against them.⁴ A coalition of indigenous organizations made the charges against Bolsonaro alleging that he encouraged miners and loggers to invade Indigenous territories even though it is illegal and intentionally promoted the spread of the COVID-19 virus into indigenous communities.⁵ WHO Director-General Tedros Adhanom Ghebreyesus warned that indigenous peoples were at the forefront of the dangerous health crisis caused by the pandemic.⁶ The Center for Global Development, a conservative think tank organization in Washington, DC., declared that the loss of indigenous lives was due to

“vaccine apartheid” -- the unequal distribution of life-saving vaccines to indigenous populations.⁷ Public Citizen, a United States-based progressive consumer rights advocacy group, furthermore reported that the crisis of “vaccine apartheid” was due to the intellectual property regime of powerful transnational corporations in the North Atlantic states. Pharmaceutical corporations not sharing the formulations for vaccines limited the distribution of vaccines to developing countries, a regime leading to the deaths of indigenous peoples across the globe.⁸ Multinational corporations seeking to extract raw materials that mainly benefit states in the northern hemisphere commit violence against indigenous peoples' and the environments of their territories.

Since the end of the fifteenth century, Europe's predatory activities involving “East India” companies from England, France,

³ International Union for Conservation of Nature (IUCN), “IUCN Director General's Statement on International Day of the World's Indigenous Peoples 2019,” August 9, 2019, <https://www.iucn.org/news/secretariat/201908/iucn-director-generals-statement-international-day-worlds-indigenous-peoples-2019>.

⁴ Nadia Pontes, “Indigenous Brazilians Accuse Jair Bolsonaro of Genocide at ICC,” DW, September 8, 2021; See also Climate Activists Call for Investigation of Bolsonaro,” *Independent*, October 12, 2021.

⁵ *Ibid.*

⁶ Stephanie Nebehay & Michael Shields, “Indigenous People Especially ‘Vulnerable’ to Coronavirus Pandemic, WHO Warns,” *Reuters*. July 20, 2020.

⁷ Justin Sandefur & Arvind Subramanian (2021, May 3) How Biden Can End “Vaccine Apartheid,” Center for Global Development, May 3, 2021. For the pandemic profiteers, see John Nichols, *Corona Virus Criminals and Pandemic Profiteers: Accountability for Those Who Caused the Crisis* (NY: Verso, 2022).

⁸ “Vaccine Apartheid,” *Public Citizen*, November 29, 2021. <https://www.citizen.org/article/vaccine-apartheid/>.

Portugal, Italy, the Netherlands, and other European states have been responsible for the genocide of indigenous peoples in the Western Hemisphere.⁹ The United Kingdom's East India Company, for instance, was enriched by exploiting indigenous peoples, resources, and minerals. At the same time, other European imperial powers exploited them further, including the Netherlands' infamous Dutch East India Company, Spain's Indias Orientales Espanolas, France's East India Company, and Portugal's Companhia do Comercio da India, among other state-assisted colonial ventures from Europe. Imperial colonization later extended these colonial ventures to Africa, South and Southeast Asia, the Pacific, and beyond.¹⁰ Today, multinational corporations of the West continue to exploit indigenous lives, disfigure ancestral homelands, eradicate biodiversity, and pollute the natural environment upon which indigenous peoples have depended for many centuries. The West's major extractive corporations have mainly been headquartered in Canada, including First Quantum, Barrick, Gabriel, Yamana Gold, Oceana Gold, Eldorado Gold, Hudbay, Nevsun, Fortuna, and Kinross. These extractive businesses are

among nearly one thousand companies listed on the Toronto Stock Exchange (TSX)-Venture list in North America.¹¹

Scientists warn that continuous environmental destruction could lead to more nonhuman-to-human, cross-species virus pandemics.¹² By the close of 2021, the COVID-19 pandemic had claimed the lives of almost six million people. In September 2021, the United Nations Special Rapporteur for Indigenous Peoples, Jose Francisco Cali Tzay, argued that indigenous people have been hit hardest by the pandemic and were most likely to die due to inadequate access to vaccines now and in years to come.¹³ WHO Director-General Ghebreyesus warned that this "vaccine apartheid" would lead to even more indigenous deaths due to future virus variants, poor health services, malnutrition, and the many deadly consequences of epidemics and pandemics.¹⁴

The Intellectual Property (IP) Regime and "Vaccine Apartheid"

Since the end of 2020, several North Atlantic pharmaceutical corporations have come to dominate the production and distribution of life-

⁹ Rudolph Rysler, *Indigenous Nations and Modern States: The Political Emergence of Nations Challenging State Power* (NY: Routledge, 2013); Hiroshi Fukurai & Richard Krooth, *Original Nation Approaches to Inter-National Law: The Quest for the Rights of Indigenous Nations and Peoples in the Age of Anthropocene* (NY: Palgrave Macmillan, 2021).

¹⁰ For the history of Europe's devastating consequences in the "New World" and beyond, see Jared Diamond, *Guns, Germs and Steels* (W.W. Norton & Company, 1999).

¹¹ Tricontinental Institute for Social Research, "10 Canadian Mining Companies: Financial Details and Violations: Briefing No.1," 2019, https://www.thetricontinental.org/wp-content/uploads/2019/04/190430_Briefing_Mining_Final_Web.pdf; See also MiningWatch Canada, an NGO based in Ottawa, Canada for extractive activities by Canada's mining companies, <https://miningwatch.ca/>.

¹² Damian Carrington, "Halt Destruction of Nature or Suffer Even Worse Pandemics, Say World's Top Scientists," *Guardian*, April 27, 2020.

¹³ UNOCHR, "Indigenous Peoples Have Been Disproportionately Affected by COVID-19: Senior United Nations Official Tells Human Rights Council," September 28, 2021, <https://www.ohchr.org/EN/HRBodies/HRC/Pages/NewsDetail.aspx?NewsID=27556&LangID=E>.

¹⁴ Matiangai Sirleaf, "Disposable Lives: COVID-19, Vaccines, and the Uprising," *Columbia Law Review* Vol.121, No.5, 71-94, 2021.

saving vaccines through use of the revolutionary “messenger RNA (mRNA)” biotechnology. The multinational corporations holding the intellectual property (IP) of the vaccine technology have included Pfizer-BioNTech of the U.S. and Germany; AstraZeneca of the U.K.; and Moderna of the U.S.¹⁵ The monopoly of the “product” patent of these mRNA vaccines has so far reaped significant profit for these corporations. The IP right of the “product patent” was firmly built into the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement of the WTO, which was created in 1995 after many years of intense negotiations between the Global North and the Global South on the General Agreement over Tariffs and Trade (GATT). Many sensitive issues were involved, including the investment dispute settlement (IDS) mechanism and IP disputes over product and process patents, among others.

The WTO’s new IP agreement has succeeded in eliminating the “process patent” right and replacing it with the “product patent” right, which means that no other drug company can manufacture the same product through different, or even cheaper, manufacturing processes. Previously, the primacy of the “process patent” allowed the “third-party” research lab and drug firms in the Global South to “reverse-engineer” the drug production process and propose alternative production methods to manufacture the same drug. The primacy of the “process patent” right had helped evade the monopoly of the IP rights held by the West’s powerful corporations, and at the same time, allowed the production of cheaper generic drugs to be shared

among the populations of the Global South who otherwise could not afford access to the high-priced drugs from the Global North. The new “product patent” right adopted by WHO thus helped eradicate the “innovative” endeavors previously conducted by research centers and medical labs of the Global South.

The new IP regime helped bring enormous wealth to North Atlantic corporations in the following ways. First, the privilege of the “product patent” helped the powerful corporation to become a “rent-collecting” agency by monopolizing the product patent right, while denying others the right to manufacture the same drug cheaply and share it with impoverished populations of the Global South. By the end of 2021, Pfizer-BioNTech had earned more than \$36 billion from vaccine sales, and other multinational corporations similarly earned enormous profit from their vaccines during the COVID-19 pandemic.¹⁶ Second, the new IP regime helped create a complex, yet competitively outsourced, global supply chain for products. This phenomenon has been called the “disarticulation of production,” in which each and every step of commodity production is supplanted by the sophisticated regional network of the “global commodity supply chain.” Pfizer-BioNTech, for instance, has developed one of the most sophisticated of these, consisting of

¹⁵ The Johnson & Johnson vaccine does not use the mRNA technology. See James Shea, “Johnson & Johnson Vaccine: How Is It Different?” *VCU News*, May 3, 2021.

¹⁶ *Ibid.*

more than 40 production sites and facilities with nearly 200 different suppliers globally.¹⁷ AstraZeneca's vaccine production has spanned over 15 countries with 25 separate manufacturing facilities.¹⁸ Another U.S. biotech firm, Novavax, produced its own brand of vaccine through its own global supply chain, including Japanese and South Korean pharmaceutical conglomerates and other firms in the U.S. and Europe.¹⁹ The corporations that held IP rights began to exploit the competitive manufacture process in relation to the vaccines and their global distribution.

Third, the IP regime allowed transnational corporations to shape preferential governmental policies through their contractual negotiations and obligations. The contract between Pfizer-BioNTech and the Brazilian government, for instance, stipulated that Brazil had to waive sovereign immunity against the firm, impose no penalty for late vaccine delivery, and agree to adjudicate future disputes, not in Brazilian courts, but at a secret private arbitration court in New York. The transnational corporations also prevented the state government from providing donations of excess vaccines and/or receiving donated vaccines from other states and/or external parties. The state was further restricted, through being prohibited from revelation of the details of contractual contents without prior written consent by the firm.²⁰

Fourth, the IP regime has given the transnational corporation the power to shield itself from future product liability lawsuits. The WTO's TRIPS helped indemnify the transnational company with regard to any civil

lawsuits involving patent infringement. For example, Pfizer-BioNTech's agreement with the Colombian government has successfully shielded the firm from any legal actions in the event of the drug's serious side-effects for their consumers.²¹ The contractual clause also required Colombia to pay the bill in dealing with potential patent infringements lawsuits brought against the firm in Colombia.²² The IP regime that was incorporated into the WTO's TRIPS has awarded the transnational corporations the state-granted monopolies to further solidify the system of international IP protection, thereby empowering corporate monopolies with IP rights and shielding the transnational corporation from compensatory damages lawsuits in the future.

Fifth, the disarticulated production of vaccines and the global commodity chain has helped to fragment and weaken the possibility of working-class solidarity and the formation of powerful collaborations and global alliances of such territorially-based progressive communities

¹⁷ Pfizer, "Manufacturing and Distributing the COVID-19 Vaccine," (accessed December 23, 2021), <https://www.pfizer.com/science/coronavirus/vaccine/manufacturing-and-distribution>.

¹⁸ Fraiser Kansteiner & Eric Sagonowsky, "What Does It Take to Supply COVID-19 Vaccines Across the Globe? Here's How the Leading Players Are Working It," *Fierce Pharma*, March 3, 2021.

¹⁹ Ibid; Mary Van Beusekom, "NOVAX COVID Vaccine Shows 90.4% Efficacy Against Infection," *Center for Infectious Disease Research and Policy (CIDRAP)*, December 16, 2021.

²⁰ DemocracyNow, "Public Citizen Special Program," October 22, 2021.

²¹ Martha Busby & Flavia Milhorance, "Pfizer Accused of Holding Brazil 'to Ransom' Over Vaccine Contract Demand," *Guardian*, September 10, 2021.

²² DemocracyNow, "Public Citizen."

as organized labor, trade unions, indigenous nations and their alliances, socialist institutions, environmental protection agencies, and progressive political activists across the globe.²³

Lastly, the IP rights regime has led to the creation of “vaccine apartheid,” further perpetuating the unequal distribution of life-saving vaccines around the globe. The vaccines produced by the Western transnational corporations have gone to the affluent states and their wealthy clients, including those in the U.S., the U.K., European states, Israel, and a few others.²⁴ Many states and their poor constituents in Africa, South and Southeast Asia, and Latin America have faced significant deficits of access to the vaccines. Even when vaccines have been made available in the developing states, indigenous peoples have been largely left out of the vaccination distribution.²⁵ The endgame of the COVID-19 pandemic, according to WHO Director-General Ghebreyesus, can only be reached by vaccinating the entire global population, including indigenous peoples all across the globe.²⁶ WHO has also warned wealthy states against hoarding vaccines, including

booster shots, instead of sharing them with people in the Global South. For instance, the U.S. has been accused of hoarding nearly 500 million excess COVID-19 vaccine doses, along with others accused of hoarding, including Canada and other European states.²⁷

The “vaccine apartheid” has ensured the creation of “disposable” populations of “vaccine untouchables” in the global peripheries, whose presence assures the future emergence and potential global spread of transmuted virus variants. The emergence of the new vaccine market also means that transnational corporations could profit by their continuous investment in new research and invention of new generations of life-saving vaccines. The “vaccine apartheid” system, meanwhile, continues to be maintained by predatory corporate policies which are leading to “vaccine genocide” of indigenous peoples around the globe.

“Vaccine Genocide” and the Corporate Monopoly of IP Rights

The “vaccine apartheid” system related to the IP regime and the corporate monopoly of

²³ Vijay Prashad, “In the Ruins of the Present,” *Tricontinental Institute for Social Research*, March 1, 2018, <https://thetricontinental.org/working-document-1/>.

²⁴ Paul Sisson & Lauren J. Mapp, “Why Are San Diego’s Black and Native American Communities Less Vaccinated? It’s About Trust,” *San Diego Union-Tribune*, November 20, 2021; Michael A. Smith, “We’re Not Doing Enough to Ensure Native Americans Are Vaccinated Against COVID-19,” *Topeka Capital-Journal*, October 8, 2021; Wawmeesh Hamilton, “Action Needed to Boost Low Indigenous Youth COVID-19 Vaccination Rate, Health Officials Say,” *CBS-Canada*, October 24, 2021.

²⁵ A. Kuniawan Ulung & Arti Ekawati, “Indonesia: Indigenous Groups Face COVID Vaccine Barriers,” *DW*, July 28, 2021; See also Anne Nuorgam, “COVID-19 and Indigenous People,” *UN Department of Economic and Social Affairs*, (last accessed on February 15, 2022), <https://www.un.org/development/desa/indigenouspeoples/covid-19.html>.

²⁶ United Nations, “‘Consistent Evidence’ of Omicron’s Spread vs Delta: WHO’s Tedros,” December 20, 2021, <https://news.un.org/en/story/2021/12/1108452>. He specifically stated that “70% of the population of every country ... [must be] vaccinated by the middle of next year” for the pandemic to end in 2022.

²⁷ “US Must Stop Hoarding Excess COVID-19 Vaccine Doses,” *Doctors Without Borders*, October 11, 2021.

life-saving vaccine technologies has created and maintained the vilified presence of unvaccinated populations who are spatially distributed all around the globe. These "vaccine untouchables" contribute to the likelihood of future zoonotic transmutation of more evolved virus forms and dangerous zoonotic variants. The corporate monopolization of IP rights also ensures a new marketplace and potential financial windfall for multinational corporations by offering new generation and endless "branding" of life-saving vaccines and booster shots to the Global North states and their wealthy customers. At the same time, "vaccine genocide" continues in relation to the "disposable" populations, including indigenous peoples around the world.

Relying on the third definitive act of genocide as defined under the 1948 U.N. Genocide Convention, "vaccine genocide" is here defined as the intentional act of creating "the group conditions of life calculated [with a high certainty] to bring about its physical destruction [and deny its future reproduction]."²⁸ While the numbers of deaths of indigenous populations may not be immediately apparent, the egregious system of "vaccine apartheid"

helps create circumstances that lead to imminent conditions that do not support prolonged life of indigenous peoples around the globe. In the so-called "nation-destroying" project emerging from European settler colonialism foisted upon the "New World" dating back to the late fifteenth century, the genocide of indigenous peoples has been a primary objective.²⁹ In North America, an indigenous population of up to 15 million, which existed when Cristóbal Colon first "discovered" the New World, had been reduced to a quarter million by 1880, when the first U.S. Census was taken, thereby accomplishing a 98% liquidation of the original population over four hundred years of settler colonialism.³⁰ Today, the "vaccine apartheid" system produced by the IP regime continues to destroy and exterminate, in whole or in part, indigenous peoples around the globe.

Multinational Pharmaceutical Corporations and "Vaccine Genocide"

As described earlier, Pfizer-BioNTech has exercised their power to impose the following conditions to facilitate the "vaccine genocide" of indigenous peoples and other vulnerable populations, including the efforts to: (1) block

²⁸ Under Article 2, the genocide was defined in the following five categories: (1) Killing members of the group; (2) Causing serious bodily or mental harm to members of the group; (3) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (4) Imposing measures intended to prevent births within the group; and (5) Forcibly transferring children of the group to another group. Article 3 defines the crime punishable under the convention, including: (1) Genocide; (2) Conspiracy to commit genocide; (3) Direct and public incitement to commit genocide; (4) Attempt to commit genocide; and (5) Complicity in genocide. See the U.N. Convention on the Prevention and Punishment of the Crime of Genocide in 1948, https://www.un.org/en/genocideprevention/documents/atrocities-crimes/Doc.1_Convention%20on%20the%20Prevention%20and%20Punishment%20of%20the%20Crime%20of%20Genocide.pdf.

²⁹ Bernard Nietschmann, "Forth World: Nations v. States." In George J. Demko & William B. Wood, eds., *Reordering the World: Geopolitical Perspectives on the Twenty-First Century*, pp.225-242, (Boulder CO: Westview Press, 1991). See also Ryser, "Indigenous Nations"; Fukurai & Krooth, "Original Nation."

³⁰ Ward Churchill, *Struggle for the Land: Indigenous Resistance to Genocide, Ecocide, and Expropriation in Contemporary North America* (Monroe, ME: Common Courage Press, 1993).

countries from donating their COVID-19 vaccines to other states, including those in the Global South; (3) adjudicate any dispute, not in a domestic court or any other public forum of the host states, but through the privately-arranged arbitration mechanism under New York law in the U.S.; (3) waive immunity against Pfizer's precautionary seizure caused by any of their vaccines in Brazil, Chile, Colombia, and the Dominican Republic; and (4) prohibit "any public announcement concerning the existence, subject matter of terms of [the] agreement" or commenting about the [contractual] relationship with Pfizer, unless it had the company's prior written consent."³¹ Such preferential contractual agreements effectively prevent indigenous peoples from bringing civil lawsuits against large corporations or having their grievances heard or adjudicated in their own domestic courts, allowing hearings only at the international arbitration panel in the U.S.

In order to challenge and eradicate the system of "vaccine apartheid" and the subsequent impact of "vaccine genocide" upon indigenous peoples, some scholars and politicians have suggested the potential application of the "socialist-oriented" model, including the measures similar to the mobilization of the National Defense Authorization Act (NDAA) in the U.S.³² The NDAA and other similar state actions may have the potential to limit the effect of the IP regime and the corporate monopoly of vaccine technologies by enabling "socialized governmental actions" in order to: (1) place corporate enterprises under government programs and engage in the state-assisted

production and distribution of life-saving vaccines; (2) engage in collaborative ventures with other states in the global production of crucial medicines; and (3) produce and disseminate such products with reasonable prices, if not fully compensated by the state, similar to the case of Cuba, People's Republic of China (PRC), and other socialist-oriented states.³³

The People's Republic of China strategies for dealing with the pandemic, for instance, have been characterized by the following principles. First, China National Pharmaceutical Group Corporation (CNP GC or Sinopharm) has produced the BIBP COVID-19 vaccine (or BIBP vaccine) which was approved by the WHO for use in COVAX in May 2021. Sinopharm is a large state-owned pharmaceutical enterprise in China which has been ranked 109th in the world in the 2021 Fortune Global 500 list. Sinopharm vaccines have been distributed through PRC's vaccination campaigns in multiple states in Asia, Africa, South America and Europe. By November 2021, more than three quarters of PRC's domestic population (76.3%) had completed the COVID-19 vaccination.³⁴ Similar to Cuba's policies of medical internationalism, China has been sending its doctors and healthcare workers to the states in the Global South, under its so-called "vaccine diplomacy," in addition to sending 1.1 billion

³¹ David Chau, "Pfizer Has Power to 'Silence' Governments and 'Maximize Profits', Consumer Group Alleges," *ABC News*, October 20, 2021.

³² See generally Nichols, "Corona Virus Criminals."

³³ *Ibid*

³⁴ Thomas Peter, "China Has Given 76.3% of Population Complete COVID-19 Vaccine Doses," *Reuters*, November 19, 2021.

vaccine doses to more than 100 states during the pandemic.³⁵

While PRC's "vaccine diplomacy" may have allowed the distribution of life-saving vaccines in the Global South, it is still unknown whether these states made vaccines available to their indigenous peoples and other vulnerable populations. Cuban doctors in their renowned Henry Reeves Medical Brigade have also been dispatched to many Latin American states, including Brazil, Venezuela, Bolivia, among others. Yet it is still unknown whether these states have allowed these doctors and healthcare workers to be strategically located to support the indigenous nations and nucleated communities, nor whether these states allowed Chinese and Cuban vaccines to be equitably distributed among indigenous peoples and other ethnic minorities in rural regions of these states. Since 2018, Brazil has removed more than eight thousand Cuban doctors and healthcare specialists who had been working in various locations in Brazil for many years.³⁶ The state governments still continued to exercise their prerogative over the domestic placement of international doctors and healthcare workers, as well as the distribution of vaccines and medical supplies donated by other states and international organizations. It is important to promote the construction of the infrastructure and medical facilities to engage in the domestic production of sufficient supplies of vaccines, medicines, and personal protective equipment (PPE), as well as to ensure the equitable distribution of these medical supplies among indigenous peoples and vulnerable populations in regional sectors.

Socialized Productions of Life-Saving Vaccines

It is important to reiterate that new mRNA vaccines have been developed by publicly funded research, while the profit accrued from such research has been privatized. In the U.S., the Department of Defense has long served as an effective funnel through which public funding has gone to high-tech research at universities and research institutes. The so-called "Pentagon Model" has been the staple system of developing a new generation of high-tech telecommunications and sophisticated bio-technology, including modern computers, transistors, internet, cyber technologies, other sophisticated technological communications, and more recently, bio-tech sciences and bio-engineering advances.³⁷ Such research endeavors have been financed through the Pentagon's Defense Advanced Research Projects Agency (DARPA), and the benefits of such publicly-financed research and technological innovations have been privatized by powerful corporations, including IBM, Microsoft, Apple, Google, Facebook, Amazon, and other high-tech industries. Beginning in the 1990s, the frontiers of government funding have also shifted into bio-technology and bio-engineering, resulting in the proliferation of medical and pharmaceutical innovations. As a result, nearly

³⁵ Ralph Jennings, "China's COVID-19 Vaccine Diplomacy Reaches 100-Plus Countries," *VOANEWS*, September 18, 2021.

³⁶ Shasta Darlington & Leticia Casado, "Brazil Failed to Replace Cuban Doctors, Hurting Health Care of 28 Million," *NY Times*, June 11, 2019.

³⁷ Noam Chomsky, "Mandate for Change or Business as Usual," *Z Magazine*, February 1993.

all of the mRNA-based vaccines have been developed by government-funded research, including the National Institute of Health and the National Science Foundation, among others. The company title of Moderna, for instance, was named after the National Institute of Health (NIH)-funded research called “Modified RNA” in order to develop the new generation of vaccines. The efforts were led by Dr. Anthony Fauci and other leading scientists in the field of virology. Because of the original contractual agreement signed by Moderna and the state government to share its vaccine recipe, the WHO-led research team in South Africa has also worked to replicate the Moderna vaccine, and in February 2022, the vaccine was finally reproduced and WHO has announced it will make the vaccine recipe available to the rest of the world.³⁸ The Pfizer-BioNTech vaccine was developed by publicly-funded endeavors, although the corporations have insisted on corporate ownership of the vaccine recipe.³⁹

COVAX and GAVI Projects

Another scenario for the state government’s approach to publicly sharing the vaccine recipe has been proposed elsewhere. For instance, China’s collaboration with WHO, COVAX (The COVID-19 Vaccines Global Access Facility), and other international organizations was designed to lead to the eradication of future pandemics. Cuba, on the other hand, decided not to join COVAX, led by WHO, GAVI (The Global Alliance for Vaccines and Immunizations), the Vaccine Alliance, and the Coalition for Epidemic Preparedness Innovations.

GAVI was set up by the Gates Foundation in 1999, currently co-leading COVAX and its vaccine pillar of the Access to COVID-19 Tools (ACT) Accelerator to procure and distribute COVID-19 vaccines. GAVI’s vaccine market-shaping efforts have been designed to make life-saving vaccines and other immunization products more accessible and affordable for lower-income states. These North Atlantic organizations and their alliances, however, do not act solely on the basis of philanthropic or humanitarian principles. For instance, the Gates Foundation was the key catalyst in privatizing the AstraZeneca vaccine, although its initial development at Oxford University in the U.K. was largely based on publicly-funded research.⁴⁰ Further, when the state of Venezuela tried to procure the vaccines from COVAX, its payment was blocked by international banks, significantly delaying its first vaccine delivery until the beginning of September 2021.⁴¹ The U.S.’s economic blockade and trade sanctions further complicated Venezuela’s access to the government funds deposited in the international banks and delayed the government efforts to purchase the life-saving vaccines for their populations. Cuba has sent 7 million vaccine

³⁸ Amy Maxmen, “South African Scientists Copy Moderna’s COVID Vaccine,” *Nature*, February 3, 2022.

³⁹ James Surowiecki, “Pfizer and Moderna Protecting Their Patents Leaves Much of the World at Risk,” *MSNBC*, October 21, 2021, <https://www.msnbc.com/opinion/pfizer-moderna-protecting-their-patents-leaves-much-world-risk-n1282454>.

⁴⁰ Mohit Mookim, “The World Loses Under Bill Gates’ Vaccine Colonialism,” *Wired*, May 19, 2021, <https://www.wired.com/story/opinion-the-world-loses-under-bill-gates-vaccine-colonialism/>.

⁴¹ “First Lot of Coronavirus Vaccine Arrives in Venezuela Through COVAX Mechanism,” *CE Noticias Financieras*, September 7, 2021.

doses to help Venezuela and, in October 2021, the Venezuelan government announced that it would start its own production of Cuba's Abdala vaccine in January 2022 in the close cooperation with Cuba.⁴² It is important to examine, however, whether the vaccines produced in Venezuela will be equitably distributed among indigenous peoples whose lands have also been long targeted by the Venezuelan government, its domestic corporations, as well as international mining interests.

Final Thoughts

The COVID-19 pandemic has posed a grave threat to the viability and survivability of indigenous peoples around the world. Many international organizations and their leaders warn that the pandemic has placed indigenous peoples at the crossroads of the greatest health risks both currently and in the future. The "vaccine genocide" system is the newest form of Europe-based, extractive activities in relation to indigenous peoples' lives, their resources

and lands conducted by the West's medical and pharmaceutical corporations, which have been accused of engaging in the practices of "bio-piracy" and "bio-colonialism" against indigenous peoples for many years. Today, Pfizer-BioNtech, Moderna, AstraZeneca, and other Western medical conglomerates continue to contribute to the inequitable system of "vaccine apartheid" and state-assisted "vaccine genocide" perpetuated upon indigenous peoples around the globe. The allied community of indigenous nations, peoples, and their supporters must seek to construct a robust organizing movement throughout the world to promote the global production of vaccines, leading the way to vaccinating the entire world population, and thus eradicating the "disposable" populations of "vaccine untouchables" once and for all.

⁴² "Venezuela to Begin Production of Abdala Vaccine in January," TeleSUR, October 21, 2021; Andreina Chavez Alava, "Venezuela: Maduro Reinforces Vaccination Over Omicron Variant, Condemns Western 'Political' Response," *Venezuelaanalysis.com* December 2, 2021.

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This article may be cited as:

Fukurai, H. (2022) The "Vaccine Genocide" of Indigenous Nations and Peoples: The Intellectual Property (IP) Regime, "Vaccine Apartheid" and "Vaccine Untouchables". *Fourth World Journal*. Vol. 21, N2. pp. 53-67.

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