

COVID-19 vaccine apartheid and the failure of global cooperation

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Abstract

The equitable distribution of COVID-19 vaccines is one of the most important tests of global cooperation that the world has faced in recent decades. Collectively, global leaders failed that crucible abysmally, creating a 'vaccine apartheid' that divided the world according to income into countries with widespread access and those without. Why, given that leaders were fully aware of the risks and injustice of vaccine inequity, did governments of wealthy countries hoard doses, impede the expansion of vaccine manufacturing and otherwise prevent equitable access to vaccines? We argue that their decisions to act selfishly are best explained by governments' accountability to domestic constituencies, their lack of leadership and commitment to multilateralism and their adoption of short-term perspectives, as well as their unwillingness to curb the influence of profit-oriented global pharmaceutical companies and, to a certain extent, of an additional private actor, the Bill and Melinda Gates Foundation.

Keywords

COVID-19, equity, global governance, global health, multilateralism, pandemic, self-interest, vaccines

Introduction

The response to the COVID-19 pandemic and in particular the equitable distribution of vaccines is one of the most important tests of global cooperation that the world has faced in recent decades. Without global cooperation, as one author starkly noted, 'the course and consequences of the pandemic cannot be resolved or addressed' (Fazal, 2020: E91). It is not the only such vital challenge – the need to stop climate breakdown is another major one – but the pandemic irrupted onto the global stage very suddenly in

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late 2019/early 2020 and posed a very serious, immediate threat to lives and economic well-being across the entire world.

Although various non-pharmaceutical interventions could help slow the spread of the virus, it soon became evident that vaccines would be essential for protecting the global population. The scientific community developed several very effective vaccines at ‘warp speed’, assisted by massive public investment in private endeavours. As a result, vaccination began in late 2020, one year after the disease had been identified – sooner than anyone had expected and far faster than any other vaccine in history. Nonetheless, the vaccine rollout ‘fell tragically short’ of what could have been achieved (Glassman et al., 2022: 28).

Even before any vaccines had been developed, governments faced the question of how they would eventually distribute them equitably, both nationally and internationally, which was a challenge on a scale that they had never faced before. Early on, they recognised that global cooperation was ethically and medically essential, rallying around slogans such as ‘None of us is safe until all of us are safe’ (Trudeau et al., 2020). Indeed, global vaccination is not only a moral imperative in terms of protecting lives, especially those of vulnerable populations regardless of where they happen to live; it also helps protect from the emergence of new variants, which could be more deadly and more able to evade vaccines (Yamey et al., 2022: 3). Global cooperation on COVID vaccines was thus in the collective long-term interest.

Nonetheless, leaders, especially those from high-income countries, failed abysmally to live up to their rhetoric and respond to the pandemic from a global perspective (Brown and Rosier, 2023; Dentico, 2021). Global cooperation had already collapsed in early 2020, when countries sealed their borders and competed savagely for limited supplies of personal protective equipment (Moon et al., 2022: 487). Wealthy countries subsequently eschewed the ad hoc multilateral vaccine acquisition mechanism that they had helped set up and signed purchasing agreements directly with pharmaceutical companies, locking up much of global supplies. They also blocked efforts at the World Trade Organization (WTO) to waive patents temporarily, which would have permitted more vaccines to be produced at an earlier stage of the pandemic. As a result, third and then fourth vaccine jabs began to be widely administered in higher-income countries in 2021 and 2022, before even 20% of the population of low-income countries, including most of Africa, had received a single jab. By May 2021, access to the vaccine was so dramatically disparate – and proportional to countries’ income levels – that the head of the World Health Organization (WHO), Dr Tedros Adhanom Ghebreyesus, referred to the situation as ‘vaccine apartheid’ (Reuters, 2021b). He and many analysts and critics, including us, use that expression rather than milder ones such as ‘vaccine inequity’ in order to ‘emphasise the scope of this moral failure and make explicit comparisons to the South African system of institutionalised racial segregation’ (Bajaj et al., 2022: 1452). States were not the only actors responsible for those disparities. Even a representative of the global pharmaceutical industry admitted that Big Pharma had ‘dismally failed’ to ensure an equitable distribution of vaccines (Thomas Cueni, Director General of the International Federation of Pharmaceutical Manufacturers and Associations, quoted in Newey, 2021). What is more, ‘The COVID-19 pandemic has exposed how easily international cooperation and multi-lateral agreements can dissolve’ (Happi and Nkengasong, 2022: 22).

This article seeks to explain the failure of global cooperation to ensure greater global vaccine equity. Why, given that they were fully aware of the risks and injustice of vaccine inequity, did governments of wealthy countries hoard doses, impede the expansion of vaccine manufacturing and otherwise prevent equitable access to vaccines? Structural

impediments to cooperation certainly posed important challenges. However, we argue that wealthy states' decisions to act selfishly are best explained by their accountability to domestic constituencies, their lack of leadership and commitment to non-binding multilateralism and their adoption of short-term perspectives, as well as their reluctance to curb the influence of profit-oriented global pharmaceutical companies and, to a certain extent, of an additional private actor, the Bill and Melinda Gates Foundation. Although wealthy states hold the primary responsibility for failure, they also hold the key to preventing the errors of the recent past being repeated, be it in future global pandemics or other major challenges that require global cooperation. It is important to document and analyse why states do not live up to their rhetorical commitments, despite the high costs of not doing so, as it can help to overcome the obstacles to effective multilateral action.

We make our argument primarily through process tracing, enriched by interpretivist analysis and some inferences for which hard data are not publicly available. In doing so, we draw on a variety of primary and secondary sources that document statements of intent and actual practices, rationales and independent analysis from experts in public health and international relations in particular. We use two complementary theoretical explanations from the literature to help us make the link between our case study and broader understandings of the difficulties facing global cooperation.

The article is organised as follows. First, we consider the nature of global cooperation and what the impediments are to its realisation with regard to COVID vaccine equity. Second, we examine the initial promise of global cooperation on the issue of COVID vaccines. Third, we analyse the disappointments of cooperation in this area. Fourth, we examine the deficient behaviour of states. Fifth, we consider the opaque role of the Gates Foundation. A conclusion sums up the findings, considers the implications, and outlines some unanswered questions that would benefit from further research.

The challenges of global cooperation on COVID vaccines

All states act in a self-interested manner, but how they define and interpret self-interest can vary tremendously and be deeply contested. They usually consider their primary duties as being towards their own survival and the well-being of their citizens. Nonetheless, in countless instances, states and their domestic constituencies derive long-term benefits from inter-state cooperation, be it in regional or other forms of groupings, or globally, sometimes in ways that may contradict perceived short-term interests. Cooperation is especially beneficial and even essential for global public goods such as peace, safety, rules governing trade and finance, environmental protection and global health, including protection from the spread of deadly pandemics. Indeed, 'multilateral, rule-based governance still seems the only way to effectively provide international "common goods"' (Hosli, 2021: xvi). Beyond enlightened self-interest or what Alexis de Tocqueville (1850) called 'self-interest properly understood', some states also have an interest in projecting an image of themselves as generous, benevolent or ethical international actors or leaders in a certain area, which could prompt them to advocate and engage in greater global cooperation.

Yet efforts to provide those public goods often disappoint or even fail. For this case study, we draw mainly from two complementary frameworks on the impediments to international and global cooperation. The first, Hale, Held and Young (2013) emphasises the complex and dysfunctional nature of international institutions, while the second, Parker and Karlsson (2014), sets out four structural impediments to effective multilateral

action. Together, they constitute analytical tools that help us understand the various components of our argument on why attempts to ensure equitable access to COVID vaccines were unsuccessful.

Hale, Held and Young (2013: 3) describe global governance as characterised by ‘gridlock’, observing that ‘Existing institutions, created for a different world, have locked in dysfunctional decision-making procedures, while the proliferation of different organisations renders the institutional architecture ever more fragmented. Together these processes have blocked global cooperation even as we need it more’. In the case of the COVID-19 pandemic, there was no pre-existing plan to deal with such an emergency. Existing global health governance institutions, notably the WHO, were not able to provide a coordinating role, as they lacked the mandate and resources (Kavanagh et al., 2021). As a result, states and non-state partners, including a relatively recent and powerful private philanthropic organisation, the Gates Foundation, set up new institutions to respond, notably the COVAX Initiative (discussed in detail below). COVAX’s response was more agile, but as a new, ad hoc and untested mechanism, its model was theoretical and its results uncertain.

The challenges to international cooperation go far beyond institutional dysfunctions and a fragmented institutional landscape. Parker and Karlsson (2014), for instance, identify four common obstacles to success. First, international problems are often very complicated. The climate crisis, for example, does not have any clear technical fix. Instead, multidimensional action on innumerable fronts is required. Second, it is hard for multiple parties to agree on what the exact problem is and how to reach a solution. For climate change, again, should emphasis be on prevention or mitigation? Third, states’ bargaining position are constrained by domestic considerations. Even if government representatives are convinced that a certain position is justified, they will be extremely reluctant to adopt it unless they believe that their populations (and especially their electorate, in the case of liberal democracies) will accept the required measures. Fourth, cooperation is more difficult when states are not convinced that the solutions will actually be effective and that all parties will uphold their end of the agreement.

Complexity, the first obstacle in Parker and Karlsson’s (2014) framework, is not per se a significant impediment to cooperation in the case of access to vaccines. The scientific community rapidly identified mass immunisation through rapid global vaccination as the best long-term answer to the spread, mutation and deadly consequences of the virus. Although global vaccination campaigns come with technical and logistical challenges, as well as social and political ones, especially when it comes to equitable access to vaccines, the problems and technical solutions were clearly identified early on. They pointed to a clear path of action from vaccine development to production and distribution. Relatedly, the second obstacle, identifying the specific problem, was achieved very quickly, as world leaders clearly acknowledged the imperative of global access to vaccines (Trudeau et al., 2020). They agreed on the path forward to a certain extent with the creation of the COVAX Initiative to incentivise vaccine development and collaborate on purchasing and distributing doses, but failed with regard to suspending intellectual property rights, which would have accelerated manufacturing. Parker and Karlsson’s third impediment proved to be the thorniest, as domestic considerations caused states to engage in intense ‘vaccine nationalism’, seeking to inoculate as many of their citizens as were willing before sharing their excess doses with other countries. Those priorities severely undermined states’ willingness to recognise their common long-term interests and engage in global cooperation until their own domestic demand for vaccines had been met. The fourth obstacle was of

somewhat lesser importance, the fear that vaccines would not be distributed effectively under the chosen mechanism. However, once some countries, especially wealthier ones, started making their own purchasing agreements directly with pharmaceutical companies, other parties' compliance did become a significant concern for states, leading to further defections from a global procurement process.

A clear additional challenge in the case of vaccines is the multiplication of actors, a phenomenon noted by Hale, Held and Young (2013: 3). Although wealthier states were the primary actors and, other than UNICEF, traditional multilateral organisations played a relatively minor role in vaccine distribution, private bodies were key players. In this case, Western pharmaceutical companies such as Pfizer, Moderna and AstraZeneca became crucial actors in international cooperation, influencing or even determining which countries would get how many doses, when, in what order and for what price, thus wielding great power over many states. Using contracts shielded from public scrutiny, they also prohibited, in many instances, countries from donating or reselling vaccine doses abroad (Storeng et al., 2021: 9). Unlike Chinese and Russian vaccines, Western ones were privately controlled and thus private goods that were at the service of private profit rather than strictly speaking public goods or diplomatic tools. Moreover, hybrid public-private partnerships, including Gavi, the Vaccine Alliance and COVAX itself, were at the centre of the vaccine acquisition and distribution process, with important participation by the Gates Foundation, further complicating the constellation of actors involved in the cooperation. While wealthy states refused to constrain the role of pharmaceutical companies and encouraged the participation of the Gates Foundation, they sidelined civil society organisations and lower-income states and ignored their important critiques and accurate predictions of the problems that would arise from the modality chosen.

Nonetheless, given the quasi-universal recognition of the necessity of equity, global cooperation on access to vaccines held a considerable amount of promise, as detailed in the next section.

The initial promise of COVID vaccine cooperation

Since the onset of the COVID-19 pandemic, political leaders and multilateral health institutions and partnerships have called for and committed to solidarity and justice in addressing the crisis. For instance, in April 2020, an informal group of countries known as the Alliance for Multilateralism released a joint declaration asserting that '[t]he fight against this global pandemic . . . requires more and enhanced international cooperation and worldwide solidarity' (Solá et al., 2020: para. 1). They pledged to develop, manufacture and equitably and ethically distribute treatments and vaccines at the global level, recognising vaccines as a global public good. They based their approach on the rationale that 'as long as anyone is at risk from this virus, the entire world is at risk' (WHO, 2020c: para. 2).

In this vein, in early 2020, specific research and development activities began under the auspices of the WHO, placing collaboration at the heart of the response. The WHO's Research and Development Blueprint 'aims to improve coordination between scientists and global health professionals, accelerate the research and development process, and develop new norms and standards to learn from and improve upon the global response' (WHO, n.d.-b: para. 2). In their discourse, public and private global health actors unanimously agreed that cooperation was crucial to developing testing kits, therapeutics and vaccines as rapidly as possible. They committed to 'strengthen the unprecedented

worldwide collaboration, cooperation and sharing of data already underway' in order to 'help reduce inefficiencies and duplication of effort' (WHO, 2020f: para. 4). In record time and thanks to massive public funding – and based on previous, publicly funded research (Cross et al., 2021) – several vaccines had been developed by the end of 2020. By June 2021, the WHO had authorised for emergency use mRNA vaccines by US-Germany's Pfizer-BioNTech and the United States' Moderna, two Chinese vaccines based on the inactivated virus, a British-Swedish AstraZeneca vaccine developed by the University of Oxford using an adenovirus, and American-based Johnson & Johnson/Janssen's vaccine, also using an adenovirus.

To ensure equitable access to diagnostics, vaccines and treatments, global health multilateral institutions and partnerships, as well as the World Bank and the Gates Foundation, launched the Access to COVID-19 Tools Accelerator (ACT-A) in April 2020. The vaccine pillar of this WHO-led initiative, named COVAX, aims 'to accelerate the development and manufacture of COVID-19 vaccines, and to guarantee fair and equitable access for every country in the world' (WHO, n.d.-a: para. 2). In particular, the COVAX Advance Market Commitment (AMC) mechanism was designed to pool funds from wealthier countries, as well as the private sector and philanthropic organisations, so that COVAX could organise the joint purchase of vaccines and their fair distribution based on each country's *needs*, rather than its *means* (Brunet-Jailly, 2016). Nine political leaders, including Canadian Prime Minister Justin Trudeau and South African President Cyril Ramaphosa, argued in July 2020 that:

we must urgently ensure that vaccines will be distributed according to a set of transparent, equitable and scientifically sound principles. . . . A fair and effective vaccine allocation mechanism, guided by WHO advice and based on needs rather than means, should focus on saving lives and protecting health systems. We call on global leaders to commit to contributing to an equitable distribution of the covid-19 vaccine. (Trudeau et al., 2020)

To avoid both vaccine hoarding and shortages, the WHO established an allocation mechanism based on solidarity and guided by ethical values of equity and fairness (WHO, 2020e). According to this mechanism, all countries would first receive doses proportionally to their population size in order to vaccinate 20% of their population, after which allocations would be decided according to the gravity of the situation in each country (WHO, 2020e). This scheme was designed to prioritise the protection of vulnerable populations and frontline healthcare workers everywhere, followed by the broader population, in a globally equitable way.

On paper and in public discourse, global cooperation passed the test of a fair and equitable vision to address the COVID-19 vaccine distribution challenge. Decision-makers and major funders all deemed it essential, including heads of government, multilateral institutions, global health partnerships, the private sector and philanthropic organisations. It appeared that in this case Parker and Karlsson's (2014) second obstacle would be surmounted, as global health actors agreed on both the nature of the problem and the measures needed to solve it. Multilateralism was to be at the service of vaccine equity in a spirit of solidarity and fairness. Moreover, global leaders seemed to believe that measures would be successful, overcoming Parker and Karlsson's (2014) fourth barrier. In practice, however, actions and solutions diverged widely from the initial rhetoric, and competition and charity supplanted the foundational principles of equity and solidarity.

The disappointments of COVID multilateralism

COVAX was unable to meet many of its targets in terms of funding, vaccinations and donations. With a \$7.8 billion funding gap at the end of 2020, and a \$3.2 billion funding gap for the period September 2020 to March 2021, it was unable to fully mobilise global health funders, despite the fact that its initial budget represented only 0.42% of total stimulus packages in G20 countries (WHO, 2020a, 2020b, 2021a). To achieve the initial objective of vaccinating 20% of the population in all countries, COVAX needed to secure two billion vaccine doses by the end of 2020 (Reuters, 2020; WHO, 2020d). However, as of 11 May 2022, fewer than 1.5 billion doses had been shipped through COVAX to the recipient countries (United Nations Children's Fund (UNICEF), 2022). More than 2 years after the deadline, COVAX still fell short of its target, having shipped 1.88 billion doses as of 16 January 2023 (UNICEF, 2023). The alarming geographic distribution of vaccines further revealed the mechanism's failure and a vaccine apartheid. As the WHO itself reported:

of the nearly 6.6 billion doses of COVID-19 vaccine administered globally by mid October 2021, the vast majority (75%) have been administered in high- and upper-middle income countries . . . , while only a small fraction (0.5%) have been administered in low-income countries. (WHO, 2021b: 2)

Indeed, as discussed in the next section, wealthier countries signed bilateral deals with pharmaceutical companies rather than procuring doses through COVAX, thus locking up supply and entrenching immunisation inequalities. To counter what Dr Tedros called 'a catastrophic moral failure [that] will be paid with lives and livelihoods in the world's poorest countries', the WHO and COVAX called for vaccine sharing by high-income countries (United Nations (UN), 2021: para. 3). These donated doses would constitute a pool of vaccines to be distributed by COVAX based on needs in low-income countries. Over a period of a few months, an ambitious global cooperation initiative based on rights, solidarity and information-sharing turned into a charity-based donation mechanism at the mercy of wealthy nations' goodwill and timing. Moreover, donations fell far short of commitments, let alone needs: As of 14 November 2022, only 29% of announced donations had been shipped to AMC through COVAX (WHO, 2022).

Global cooperation also fared abysmally in another multilateral body, the WTO. One step towards more equitable access to vaccines would be to lift temporarily intellectual property protections so that they could be produced on a massive scale, including in the Global South. As early as October 2020, India and South Africa submitted such a proposal to the WTO that won the support of most of the world's countries. This measure would go further than the existing provisions in the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) to facilitate the expansion of manufacturing of generic COVID vaccines. Despite calls to consider vaccines as global public goods, several wealthy, mainly European WTO members blocked the proposed waiver, which is possible because such waivers require a consensus among states. Opponents included countries that host an important pharmaceutical industry, such as Germany. In June 2022, WTO members agreed on a limited version of the waiver that excluded diagnostics and therapeutics and 'fail[ed] to effectively address access to technology and manufacturing know-how needed to expedite production of vaccines' (The People's Vaccine, 2022: 1).

Countries that opposed the waiver argued that sharing patents and related information would disincentivise investments in research and development for new drugs, and that the

priority was to ramp up production with existing manufacturing capacities. They emphasised that developing new capacity requires knowledge sharing but also lengthy technology transfer, approval by regulatory bodies, and production capacities. Nonetheless, setting aside the ethical argument for sharing life-saving technologies, most research funds came from public sources (see, for example, Cross et al., 2021), which should guarantee fair prices, equitable access, and publicly available data and discoveries. In addition, countries such as Senegal and Indonesia notified the WTO that they had the capacity to manufacture the much-needed vaccines (Okonjo-Iweala, 2021). Indeed, vaccines should also be manufactured in low-income countries as ‘there is no guarantee that the production surpluses will automatically translate into improved access’ (Green, 2021: para. 34). However, that logic threatened the interests of powerful pharmaceutical companies and those of the countries that they are based in, which wish to maintain their quasi-monopoly over a highly profitable drug market (Brunet-Jailly, 2016; Gopakumar, 2016). UN Secretary General António Guterres, the representative of the most prominent multilateral organisation, recognised his organisation’s impotence:

WHO, the whole UN system, have shown leadership, but . . . we have no power to force companies to license or to make countries accept that TRIPS will not apply. We cannot force countries to organise their vaccination programs in order to take into account also the vaccination programs of other countries. I mean, the power is in the countries that produce vaccines, or might produce them, and in the companies. (Guterres, 2021)

For its part, the World Bank did have the financial power to support equitable access to vaccines, but ‘lacked leadership and flexibility’ (Sandefur, 2021: para. 3) and acted quite slowly. In October 2020, it pledged \$12 billion to help low-income countries purchase and deliver vaccines, increased to \$20 billion in July 2021. However, more than 2 years later, as of 29 November 2022 only half (\$10.1 billion) had been approved (World Bank, n.d.). It was also only in July 2021 that an updated financing mechanism allowing the World Bank to directly finance vaccine purchases on behalf of low-income countries through COVAX was set up (Thomson Reuters, 2021).

At the regional level, multilateralism has also proved disappointing. The European Union (EU) instituted an EU-first approach as it rushed to conclude massive bilateral advance purchase agreements with vaccine manufacturers and temporarily restricted vaccine exports (European Commission, n.d.). In January 2022, it was the second-largest purchaser of vaccines, just behind COVAX (UNICEF, 2022). Ironically, and despite vaccine procurement being a zero-sum game, the EU justified its strategy on solidarity grounds to avoid disparities among EU countries and asserted that it was compatible with global solidarity (European Commission, n.d.). This self-centred attitude overshadowed the EU’s relatively generous commitments towards COVAX: At the end of 2022, Team Europe ranked first in terms of financial commitments and second in terms of dose-sharing commitments. However, deliveries were slow, with only 39% of promised doses being shipped as of 14 November 2022 (WHO, 2022). Meanwhile, EU-based pharmaceutical firms benefitted from the crisis, as the EU hosts numerous developers and producers of COVID vaccines (UNICEF, 2022).

In November 2020, the African Union set up its own pooled procurement mechanism, the African Vaccine Acquisition Trust (AVAT), to secure and distribute enough doses for the continent. Apparently fuelled by distrust in the Western-led COVAX initiative, it further fragmented the global cooperation landscape (UNICEF, n.d.). However, it took months to secure deals with manufacturers and vaccine delivery did not begin until

August 2021 (Africa Centres for Disease Control and Prevention (Africa CDC), 2021). AVAT's goal of vaccinating 60% of the African population by the end of 2022 was far from being attained: as of 31 December 2022, only 25.6% of the population was fully vaccinated (Africa CDC, 2022).

Despite appealing rhetoric on solidarity, multilateralism has proved extremely disappointing in terms of vaccine equity. An International Monetary Fund study concluded that such disparities were overwhelmingly due to the lack of access in low-income countries and only marginally the result of vaccine hesitancy (Hakobyan et al., 2022). The myriad global and regional institutions, both old and new, did not rise to the challenge of vaccine equity – in line with Hale, Held and Young's (2013: 3) critique of international institutions' capacity – aggravated by deficiencies in multilateral leadership. As a result, and contrary to political leaders' declarations, where one lives clearly did determine one's access to vaccines. As demonstrated in the next section, bilateral actors' selfishness, lack of leadership and lack of commitment to multilateralism played a key role in generating the vaccine apartheid.

States as spoilers

Although the actions and inactions of international organisations contributed to the lack of vaccine equity, primary responsibility for the lack of international cooperation lies with states. In addition to having been responsible for setting up the deficient mechanisms that failed to ensure greater vaccine equity, national leaders acted in line with a narrow, short-term interpretation of self-interest, often influenced by private actors. Moreover, they created an environment in which those private actors could wield great influence and failed to regulate them in ways that would have ensured a more equitable distribution of vaccines.

Although even wealthy states were supposed to source an initial 20% of their vaccine needs from COVAX, they quickly circumvented the multilateral acquisition mechanism to sign bilateral deals with pharmaceutical companies with enough supplies to double-vaccinate their citizens many times over, including more than 500% of the population in the most extreme case of Canada (Brown, 2022: 100). High-income countries locked up the supplies available on the market, leaving very little for low-income countries or in fact COVAX itself. Afraid to be caught short, with only a few exceptions, they stockpiled vaccines and held onto options for future purchases, while other countries struggled to immunise even their healthcare workers and most at-risk populations, and the pharmaceutical companies prioritised those bilateral contracts over deliveries to COVAX. Moreover, several vaccine-producing countries, including the United States, instituted export bans on vaccines until local demand was met.

Only when rich countries clearly had more doses than they could possibly use did most of them begin to donate their surpluses. With the realisation that booster shots would be needed, they shared only once their freezers were overflowing. As a result, they rolled out their vaccine donations only slowly and, in many instances, close to their expiry date, which made it difficult or impossible for them to be used in recipient countries. That reluctance to share exposed 'the selfishness of rich nations' (Stiglitz, 2022: 2) and led to the wastage of countless doses.

The sharing of excess vaccines, only once high-income countries had fully met domestic demand, transformed any vision of global solidarity and cooperation into a charitable endeavour. Rather than follow a distribution model based on equity, Western countries

used COVAX as a mechanism to dispose of their surpluses. To make matters worse, they often earmarked those donations to specific countries for opaque soft-power purposes, circumventing COVAX's principled and transparent distribution formula and undercutting its effectiveness (de Bengy Puyvallée and Storeng, 2022: 2, 7). They thus undermined COVAX and its foundational principles, reducing it to a logistical body rather than an instrument of global equity.

Other than Hong Kong, only OECD countries had donated vaccines to COVAX as of 23 March 2022 (Multilateral Leaders Task Force on COVID-19, 2022). Many of them, most prominently the United States, also pursued parallel country-to-country donation programmes. Some OECD members, such as Australia and a few EU countries, as well as non-Western countries, engaged solely in bilateral 'vaccine diplomacy' campaigns, rather than channel donations multilaterally, which also undermined global cooperation and equity (de Bengy Puyvallée and Storeng, 2022: 4). India, for instance, privileged the provision of its version of the AstraZeneca vaccine to its Asian allies (Apolinário et al., 2022). However, it halted those efforts from March to October 2021, as it put in place a COVID vaccine export ban in reaction to a severe domestic outbreak, thereby clawing back the reputational benefits it had accrued through its vaccine sharing – and severely impairing COVAX's vaccine acquisition plans.

Similarly, China's vaccine donations and sales around the world, at a time of short supply, helped it win accolades in developing countries, especially low-income ones that lacked access to any other sources. However, its initial soft-power gains were later arrested by rumours of conditional access to further supplies, problems with delivery schedules of second doses and the vaccines' lesser effectiveness than Western vaccines, especially after the rise of new variants.

Other developing countries sought to sell vaccines that had not yet received WHO approval for emergency use, primarily because the countries did not release reliable full-trial data on safety and effectiveness. Notably, Russia tried to curry favour with its Sputnik V vaccine, including by licencing it for manufacture in other countries, such as Argentina and Brazil. Russian allies Syria, Belarus and Kyrgyzstan were reported to be the top three recipients of Sputnik V doses (de Bengy Puyvallée and Storeng, 2022: 4). Global distribution figures of Russian vaccines, however, remain unclear and demand faltered even before the February 2022 Russian invasion of Ukraine, which further hampered sales, including because of sanctions, and caused the WHO to suspend the Sputnik emergency authorisation approval process. Very few of the Cuban vaccines, Abdala and Soberana 2, have been sold or produced abroad, with rare exceptions that include 'pariah states' such as Iran and possibly Venezuela.

Global demand is strongest for the Western-developed vaccines, which are all privately controlled, even though AstraZeneca sold its doses at cost until November 2021, and the companies all benefitted from massive public investment (Baker and Koons, 2020; Safi, 2021). Western states' behaviour cannot be understood without reference to their relationships with large pharmaceutical companies. Those links, however, are not immediately obvious – most interactions are held behind the scenes – and they must usually be inferred. Indeed, Big Pharma routinely engages in lobbying and corrupt practices with states, health practitioners and researchers to ensure its continued profitability (Montalban, 2011; Rivière, 2003). This search for profit supersedes people's health needs, creating a direct conflict of interest (Brezis, 2008; Ravelli, 2015). For instance, Germany's and the EU's opposition to a TRIPS waiver is no doubt linked to the location on their territory of large, multinational pharmaceutical firms whose interests the states want

to protect. And those companies, as Stiglitz (2022: 2) notes, ‘want to maintain their monopoly profits for as long as possible’. Other countries, such as Canada, that are not home to COVID vaccine-producing companies still acted in the interests of Big Pharma. Heavily lobbied by pharmaceutical companies, they failed to support a TRIPS waiver and other efforts to force the companies to share technology, supplies and know-how that would expand the global production and distribution of COVID tests, prophylactics, vaccines and treatments (Forrest, 2022). Thus, the inequitable access to COVID-19 vaccines reflects the conflict of interest between health and profits, as:

The persistence of large numbers of unvaccinated people enables new variants to emerge, which in turn requires tweaks to existing vaccines and renewed doses to keep people safe in what becomes a win for the shareholders of Big Pharma, and a loss for humanity. (Ghosh, 2022: 106)

What began as a principled, rights-based approach to vaccine distribution via COVAX morphed into a mechanism for high-income countries’ charity-based disposal of vaccine surpluses, often instrumentalised for soft-power purposes via country-specific earmarking, rather than going to the COVAX pool and distributed according to the agreed-upon equity-based formula. Thus, states – and not just Western ones – espoused the rhetoric of an ethical approach and global cooperation out of collective self-interest. They took steps to set up mechanisms for vaccine equity, but then undermined them out of an overwhelming concern for their national self-interest and the well-being of their citizens, as well as some soft-power considerations. This calculus, however, adopted a short-term perspective, even though states’ long-term shared interests lay in controlling the pandemic as rapidly as possible on the global scale (Lu, 2022). States also protected profit-seeking private interests, despite proposals to temporarily waive, given the global health emergency, some intellectual property provisions that would facilitate the prevention and treatment of COVID without threatening Big Pharma’s massive profitability. More broadly, industrialised states chose not to regulate the pharmaceutical sector in ways that would enhance global vaccine equity.

The multiplication of actors with competing interests made for a complex institutional landscape, validating Hale, Held and Young’s (2013) concerns about institutional and systemic dysfunctions, while states’ domestic political considerations and justified fears of other states’ defection caused them to undermine the system that they created, in line with the third and fourth obstacles to global cooperation that Parker and Karlsson (2014) foresaw. States were the main spoilers of global cooperation for vaccine equity, including by allowing private pharmaceutical companies to wield tremendous influence. They also permitted an additional actor to play an important and ambiguous role in influencing the form and nature of cooperation in this area: the Bill and Melinda Gates Foundation.

The Gates Foundation: Influencer or rogue actor?

The Gates Foundation has become one of the most powerful and influential global health actors, notably through its pivotal role at the WHO, Gavi the Vaccine Alliance and the Coalition for Epidemic Preparedness Innovations (CEPI), all of which helped shape the global response to the COVID pandemic. Although global health is in dire need of the Gates Foundation’s resources, the Foundation’s growing power and influence have raised significant concerns, including ‘the effectiveness, appropriateness and impact’ of its funding, notably the focus on market-based solutions that have historically benefitted

people unequally, and ‘its lack of transparency and accountability’ (McCoy and McGoey, 2011: 151–153), as well as its opaque governance system (Beasley and Cheney, 2021) and its links with pharmaceutical companies in the Global North (Levich, 2018). Another major concern is the Gates Foundation’s role in shaping global health governance and priorities (Birn, 2014; Mahajan, 2018; McGoey, 2015), including due to its massive financial contributions to the WHO, for which the Gates Foundation was the second-biggest funder in 2018–2019 (Crawford, 2021). The Gates Foundation’s arrival on the global health scene thus contributed to the fragmentation of the global health structure and to the proliferation of actors, which represent a dual challenge to global cooperation as identified by Hale, Held and Young (2013).

The Gates Foundation has been omnipresent from the onset of the COVID-19 crisis. In February 2020, days after the WHO declared COVID an international emergency, the Gates Foundation committed \$100 million to the response, including the development of vaccines (BMGF, 2020). Although the Gates Foundation praised global cooperation under WHO’s leadership, it remained vague about how much of these funds would go to the WHO. Private foundations are not accountable to the public, and the Gates Foundation’s opaque governance and processes impeded transparency on the management of the COVID crisis (Cheney, 2020; Levine, 2020). In addition, along with partners, the Gates Foundation launched the COVID-19 Therapeutics Accelerator, a public–private partnership that later became the ACT-A. By establishing a parallel mechanism to the WHO’s COVID-19 Solidarity Response Fund, it undermined a public initiative, contributed to further fragmenting the global health landscape, and reinforced the use of market mechanisms and the involvement of large pharmaceutical companies (Hargreaves, 2020). However, the market-based mechanism underpinning COVAX AMC failed: The creation of incentives for pharmaceutical companies to invest in expensive research and testing by covering the costs and pre-ordering vaccines resulted nonetheless in protected formulas, high prices and vaccine hoarding by rich countries in an oligopolistic market.

Beyond increasing vaccine manufacturing capacity, it is important to reinforce health systems from a structural, multidimensional, long-term perspective that aligns with concepts of justice and solidarity. However, and despite its declarations, the Gates Foundation had committed only \$1 million to the health system pillar under the ACT-A as of 14 November 2022, which represented 0.2% of its total financial commitments to the ‘accelerator’ (WHO, 2022). By overlooking potentially more transformative investments, it showed its preference for short-term fixes that benefit pharmaceutical companies but contribute to low-income countries’ dependence on charity, rather than on consolidated national health systems capable of facing future crises.

Finally, despite his declared intention to establish COVID vaccines as global public goods, Bill Gates and his foundation supplanted the WHO’s knowledge-sharing initiative, lobbied the US government against intellectual property (IP) waivers and voiced his opposition to sharing vaccine formulas (Gates, 2020; Gerson, 2021; Kilander, 2021; Reuters, 2021a; Zaitchik, 2021). In addition, the Gates Foundation convinced the University of Oxford to keep its vaccine formula secret and to partner with AstraZeneca, whereas the university had originally planned to share its discovery through an open licence (Hancock, 2020; Maheshwari, 2021). As a result of privately led manufacturing and their decision not to intervene more proactively, states are at the mercy of production and pricing by firms (Srinivasan and Rao, 2021). History repeated itself when the Gates Foundation funded the development and production of COVID-related treatments but remained silent on their voluntary licencing (Ravelo and Byatnal, 2021). The Gates

Foundation also played an important role in causing COVAX's overreliance on India as its primary vaccine supplier, which backfired when, as mentioned above, the country temporarily banned COVID vaccine exports for most of 2021 (Médecins Sans Frontières, 2021: 6).

Private philanthropic organisations, including the Gates Foundation, have long been criticised for promoting short-term, market-based solutions that do not address the root causes of global health problems (Birn, 2014; Bishop and Green, 2015; Mahajan, 2018; McCoy and McGoey, 2011). In the case of COVID-19, the Gates Foundation again almost exclusively focused on a short-term, technical fix, rather than also seeking fairer, longer-term solutions and addressing the underlying causes of the pandemic (Horton, 2022). As of January 2023, Bill Gates is advocating for future pandemic preparedness according to his visions, with a predominant role of the private sector and market mechanisms (Banco et al., 2022; Zaitchik, 2021).

Private entities such as pharmaceutical companies and philanthropic organisations filled a void left in public health by states, which have failed to regulate private actors in pursuit of the global public good. Indeed, some analysts suggest that the prominent role of private actors is not new and comes from 'the combination of governments gradual withdrawal from the realm of R&D and de-prioritization of immunisation, and pharmaceutical companies' reluctance to innovate for populations of poor countries' (Stevenson and Youde, 2021: 411; see also Youde, 2013). A 'curious mixture of the private and the public', philanthropic organisations are self-interested while being 'shaped by public entities' and acting for 'their [own] conception of the public good', which, combined with virtually unlimited funding, is problematic (Blunt, 2022: 2040; see also Harman, 2016). Private actors' financial power and constant lobbying of state entities allows them to influence health policies, which results in a regulatory compromise that allows them to pursue both profits and public health goals (Harman, 2016; Montalban, 2011; Rivière, 2003).

A similar dynamic unfolded during the COVID-19 pandemic as states embraced vaccine nationalism and lacked leadership at the multilateral level, allowing non-state organisations to use their funds to shape the global response on their terms. Private organisations and hybrid public-private ones seized the opportunity: According to a study conducted on the role of the Gates Foundation, the Wellcome Trust, Gavi, the Vaccine Alliance, and CEPI during the pandemic, '[t]he organizations' leaders had unprecedented access to the highest levels of governments, spending at least \$8.3 million to lobby lawmakers and officials in the US and Europe' and played 'key roles in identifying which pharmaceutical and scientific firms would be earmarked for funding' (Banco et al., 2022). Pharmaceutical companies also mobilised and presumably lobbied state entities, in particular to prevent a TRIPS waiver, to protect their profits (Ghosh, 2022). However, ultimately, the problem lies with the unwillingness of states to force vaccine developers and producers to give free access to the results of their research and set fair prices (Ghosh, 2022; Labonté, 2022).

The Gates Foundation has mainly operated behind the scenes in major global health institutions and partnerships, making it difficult to weigh the pros and cons of its participation. Nonetheless, its involvement has contributed in multiple ways to creating and maintaining vaccine apartheid through its market-based policy interventions. With states' acquiescence, it has also further fractured the global health governance system that was already under strain, exacerbating the kind of dysfunctions that Hale, Held and Young (2013) described. Instead, the Gates Foundation could have used its political and financial influence for more equitable purposes. For instance, it could have advocated a

TRIPS waiver and included conditions on open access to research on vaccines and more broadly knowledge- and technology-sharing, as well as fair prices and distribution, in its own agreements and contracts with research entities and pharmaceutical companies (Banco et al., 2022). It could also have focused on strengthening tested, accountable, existing global cooperation institutions such as the WHO, on reinforcing health systems, and on raising awareness on the deeper causes of the pandemic (Banco et al., 2022; Horton, 2022).

Conclusion

This article seeks to explain why global cooperation for COVID vaccine equity failed dramatically, despite being in the collective, long-term interest of all countries. Why did states, especially high-income ones, eschew and even undermine multilateral efforts to prevent ethically indefensible vaccine apartheid, despite being well aware of the risks involved to them, including the cost in lives and economically, of prolonging the pandemic?

We argue that governments chose to act selfishly primarily because they answered above all to domestic constituencies, which wanted as many vaccines as possible and as fast as possible, and national leaders made no attempt to convince their citizens that a more principled or long-term calculus was preferable. They also clearly lacked a commitment to multilateralism itself, creating a custom, hybrid public-private global COVID vaccine acquisition and distribution mechanism. They then reneged on their non-binding commitments and repurposed COVAX as an instrument through which to distribute their excess supplies, including to countries that they themselves designated for geopolitical reasons, further undermining multilateralism. Their collective prevention of intellectual property waivers and other measures to ensure an expansion of the manufacture and subsequent distribution of vaccines and treatments reflected the financial interests and influence of the powerful profit-oriented pharmaceutical industry, which they did not compel to act in the public interest. In this process, states also allowed a private philanthropic organisation, the Bill and Melinda Gates Foundation, to play an influential but ambiguous role, while excluding civil society actors, which had predicted many of the failures outlined above.

Equitable access to COVID vaccines was a challenging endeavour – scientifically, economically and logistically, but above all politically. The failure was primarily one of national leadership in high-income countries. However, some of the structural hurdles identified by scholars suggest that it was not just one of personal agency and political will. In line with Parker and Karlsson's (2014) framework, the complexity of the problem required a multilateral solution, which the various actors immediately recognised. As such, that hurdle was not a serious impediment per se. Although the problem was relatively clear, along with the desired solution, the means of reaching that solution were the object of a consensus only at the rhetorical level. Lacking a pre-existing plan to address the challenge, wealthy states chose not to establish a robust, binding system, preferring ad hoc institutional mechanisms that they could easily undermine. Faced with intense domestic pressures and the realities of beggar-thy-neighbour bilateral purchasing agreements by other countries, richer states in particular quickly abandoned multilateralism in practice and succumbed to vaccine nationalism. Once their own needs were met, they returned to a modified multilateralism, based on the charity model, seeking recognition for their generosity, rather than following an ethical, needs-based formula based on principles of solidarity and justice. The multiplication of actors, identified as an additional challenge by Hale, Held and Young (2013), further complicated the task. In particular,

complex and untested governance structures that included powerful for-profit pharmaceutical companies and the Gates Foundation, but not civil society organisations, privileged private–sector perspectives over those of low-income countries and marginalised people, and hindered the goal of equitable vaccine distribution.

Those structural challenges, however, by no means meant the cooperation was bound to fail. They were all predictable and indeed predicted, and actors could have put in place mechanisms to overcome them, at least to an important degree. So what would effective global cooperation on access to vaccines have looked like?

To perform better, global cooperation would have to be based on an ethical, human rights–based approach on a global scale, which implies a shared duty to ensure an equitable international distribution of vaccines without prioritising some categories of countries over others (Gostin et al., 2023), which states had committed to doing in the early days of the pandemic (Solá et al., 2020). To do so, states would need to reduce the role and tremendous influence of the pharmaceutical sector and leverage the massive public investments in vaccine development to treat vaccines as public rather than private goods. They should include civil society organisations’ participation and give greater voice to poorer countries in order to help ensure that the global population’s interests are respected, which is actually in states’ collective long-term interest as well. Such a system would require that states enact enforcement mechanisms to prevent defections in the acquisition and sharing of doses in accordance with a needs-based formula, which they will be reluctant to do in response to strong domestic expectations. A robust system would be essential to prevent the stockpiling of vaccines by wealthier countries, while poorer ones go virtually unvaccinated, as was the case throughout 2021 and well into 2022. It should also be more transparent and rule-based than the COVAX Initiative, which was co-opted by Western countries as a channel for politicised donations, rather than a needs-oriented body based on sovereign equality. Charitable donations do save lives, but they ‘represent an inefficient, short-term amelioration rather than a sustainable long-term solution’ (Bajaj et al., 2022: 1452). Faced with domestic scepticism, top-level officials in high-income countries would need to exercise leadership and better navigate competing visions of self-interest by explaining the decisions to their citizens and convincing them of their long-term value from both an ethical perspective and ‘self-interest properly understood’, rather than capitulating to short-term public opinion – an admittedly challenging task. A compromise might actually be required to be politically palatable, balancing national and international responsibilities for people’s well-being.

The failure of multilateralism to prevent COVID vaccine apartheid bodes very poorly for future pandemics and other crises. Already, the same wealth-based dynamics are playing out with regard to access to COVID treatments (Green, 2022) and updated vaccines, with high-income countries obtaining priority access at the expense of lower-income ones. What is required instead is a well-funded, non-COVID-specific multilateral mechanism for ensuring that those failures are not repeated. It should be part of the UN system, perhaps based in a revitalised WHO, and not have parallel structures that further weaken and delegitimise the UN as the main locus of global cooperation. COVID-related failures have already made the UN seem like a ‘symbolic space, dominated by lofty statements and limited decision-making’ (Prato and Adams, 2021: 2). Those failures have further undermined global cooperation and pushed states to organise regionally, for instance, through the African Union. There are reasons to be sceptical about the will of national leaders to make the commitments necessary to put in place a Pandemic Treaty that is up to the challenge (Becker Lorca, 2023: 59; Wenham et al., 2022).

This article has illustrated a case of short-term national policy-making that is neither in individual states' own long-term interest, nor in the global interest. Future research can assess the lessons learned from the failure of global cooperation to prevent vaccine apartheid and analyse the extent to which states put them into practice. More broadly, it can analyse the impact of the worst pandemic in a century – and the hugely disappointing international response to it – on global cooperation structures and practices. To tackle the climate crisis and other pressing global problems, it is crucial to understand better how to ensure that states work together to overcome their narrow, short-term perspectives and place more value on shared longer-term ones, in spite of incentives against doing so.

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