## **Essay**

# The Vaccination Cold War

by JONATHAN D. MORENO, JUDIT SÁNDOR, and ULF SCHMIDT

ny hopes that the novel coronavirus pandemic would create an opportunity for global solidarity were dashed within the first few weeks of spring 2020. The list of institutional disappointments is long, from suspicions that the World Health Organization (WHO) had excessively indulged China's opaque reporting to the fumbled early testing system of the U.S. Centers for Disease Control and Prevention. Yet, in their details, the dispiriting stories have unfolded differently around the world. Welfare states in Europe, East and West, generally fared well in rallying their populations to lockdowns of varying degrees in spring 2020, while the United States and Britain did not. Relatively wealthy countries like Spain and Italy were hard hit in the first wave, while Vietnam and Pakistan were not. Some small rich Asian countries avoided the worst, but so did some small poor countries. Countries that are among the world's biggest producers of vaccines have been unable to provide them to their own people, with disastrous consequences.

Nor have all the lessons of 2020 been crystallized yet. Even now, the success or failure of Sweden's model of minimal lockdowns is inconclusive—the result was better in terms of the lives-versus-economy trade-off than what many other countries experienced but not in comparison with the experiences of Sweden's Scandinavian neighbors. The politicization of the wearing of face masks was intense in the United States, but hardly anywhere else. Amid all these disorienting manifestations of the global pandemic response, history can be an important analytic tool.

### **Vaccine Nationalism**

Vaccine nationalism, understood as a grab by some wealthy countries for maximum vaccine supplies,

Jonathan Moreno, Judit Sándor, and Ulf Schmidt, "The Vaccination Cold War," *Hastings Center Report* 51, no. 5 (2021): 12-17. DOI: 10.1002/hast.1282

has been heterogenous in its manifestations. In the fall and winter of 2020, a group of rich Western nations organized themselves both financially and contractually to take efficient advantage of their lucky guesses about innovative mRNA vaccine platforms. Prime Minister Boris Johnson (in a fit of candor from which he quickly recovered) attributed the United Kingdom's rapid accrual of vaccine supplies to "capitalism, because of greed, my friends."1 The European Union and Canada, however, tried not to venture down a road in which the dark side of capitalism would dominate. Meanwhile, in some countries in Central and Eastern Europe, vaccine nationalism has been transformed into vaccine populism for example, in the Hungarian government's insistence that vaccine imports from China and Russia were more desirable than those from the European Union.<sup>2</sup> As nationalistic sentiments strengthened in reaction against European integration and European concerns about the Hungarian government's deviation from the rule of law, Prime Minister Viktor Orbán sought to downplay the role of the European joint efforts to access vaccines and looked for alternative sources. Some actions of solidarity, such as Serbia's offer to vaccinate some citizens from other ex-Yugoslav republics, could also be interpreted as being motivated by geopolitical interests.

What one finds, in short, is a veritable babel of responses, some predictable and some not. The situation was exacerbated by a number of factors in the run-up to the pandemic in the 2010s, including skepticism about the viability of the liberal international order put in place mainly by the United States and Britain after World War II and the migrant crisis in southern Europe in 2015. Nor was global stability enhanced by U.S. actions such as withdrawal from the Paris climate accord and the nuclear deal with Iran.

Would these results have been different half a century or more ago, when smallpox was eradicated and hopes were high that international cooperation would yield similar results for other infectious diseases?<sup>3</sup> Is this a story

# The emergence of vaccine nationalism and vaccine populism during a global crisis demonstrates that the politicization of medical science can impede the pooling of resources and expertise through international cooperation.

about the stability provided by the bipolar postwar world, juxtaposed with the complex geopolitical repositioning that finally followed the collapse of the Soviet Union, or is that too rich an irony? A multipolar world may indeed be less prepared to cope with an international health crisis than a bipolar one. In any case, the patterns of global response are not only reminiscent of the Cold War era itself but also suggestive of a new vaccination cold war.

### **Postwar Vaccine Propaganda**

The experience of a divided Europe, both during and following the Cold War, may be particularly instructive. As researchers within the European Research Council project Taming the European Leviathan: The Legacy of Post-War Medicine and the Common Good, we are particularly interested in the legacy of medicine and the common good in postwar Europe. Far from providing evidence of stability, postwar history seems to suggest that international collaboration in the face of epidemic health crises was anything but frictionless. Relations between countries—East and West were marked by different interpretations of, and occasional refusal to share, trial data about vaccine efficiency and medical ethics. Attempts to exploit perceived (and real) advantages in vaccine production and delivery for geopolitical and propaganda objectives became commonplace. In East Germany, health and social welfare remained closely linked to political propaganda about the benefits of state socialism. Under the banner "socialism is the best prophylaxis," the Communist regime launched a concerted campaign against infectious diseases, introducing mandatory vaccinations against smallpox, poliomyelitis, diphtheria, tetanus, pertussis, and tuberculosis in the 1950s and against measles in the 1970s. Flu vaccination was recommended but not compulsory. Up to the age of eighteen, citizens received about twenty different vaccines. Investing in health prophylaxis, officials argued, was not only applied business economy but also an instrument to establish a socialist utopia.

The Cold War story of the Salk-Sabin vaccines against poliomyelitis, an acute viral disease that occurred endemically and epidemically throughout the twentieth century, affecting over sixty million people worldwide, exemplifies how vaccines were instrumentalized in the ongoing propaganda war. As each of the major powers in East and West vied to cement their dominance in science and medicine, issues relating to novel types of vaccines were propelled into the center of politically charged debates. In the mid-1950s, the

reputation of the Salk vaccine suffered following the "Cutter incident," in which almost one hundred patients vaccinated with the Salk vaccine from the Cutter laboratories in the United States, as well as over one hundred fifty family and community contacts, contracted polio. For experts in East and West, questions also remained about its efficiency and safety record. By contrast, the orally administered and significantly cheaper Sabin-Chumakov vaccine became closely associated with Soviet and Eastern European science and was thus viewed with skepticism by Western scientists and health officials.

By the late 1950s, debates about vaccine efficiency and safety set the scene for propaganda offensives between East and West Germany in which science and politics fused into one. At the research level, East Germans not only became prime target groups for experts trying to combat infectious diseases in the Eastern Bloc but were also enrolled in mass trials with experimental vaccines to boost socialist science. Vaccinations were seen as a way to strengthen the social fabric and raise awareness for the socialist common good (Gemeinwohl).

They also offered a propaganda opportunity against West Germany, where vaccine uptake was known to be lower. In June 1961, after a flurry of diplomatic activity between the East German regime and their "friends" in Moscow, Willi Stoph, a minister without portfolio, offered the West German government "humanitarian aid" in the form of three million doses of the Sabin-Chumakov vaccine. The offer was a way of demonstrating the superiority of the socialist health care system.<sup>5</sup> In his telegram to West Germany's Chancellor Konrad Adenauer, Stoph did not mention that the three million vaccine vials came from Soviet production facilities.<sup>6</sup>

To simply reject the offer out of hand would have placed Adenauer's government in a difficult position and might have led to adverse publicity. What made the offer particularly sensitive was not only that West German media outlets, helped by the authorities, had highlighted East German supply shortages but that they had also (a year earlier) engineered Stoph's downfall as the minister of defense by exposing his Nazi past. Now the tables had turned. East Germany's attempt to manipulate the West German media against their country's government in the ongoing cat-and-mouse games between the two nations was a clever move at the height of the Cold War. Fortunately for Adenauer's government, the independent Federal Health Board called for restraint with

September-October 2021 HASTINGS CENTER REPORT 13

novel types of vaccines, which, rather than being injected, were taken orally, because no sufficient trial data was yet available. Following the "Cutter incident," polio vaccines produced in the United States, such as the Salk vaccine, were viewed with skepticism, alongside the skepticism about vaccine administration. While the overly cautious approach of the West German health authorities in relation to vaccines from both East and West may not have helped the children of the polio-affected regions, it gave Adenauer's government a rationale to politely decline the East German offer.

In the ongoing propaganda campaign, governments and scientists in the West argued that mass vaccine trials and compulsory vaccination in the Soviet Union and Eastern Europe reflected a totalitarian state that curtailed the freedom of individuals and communities. Eastern European governments, however, saw vaccinations, and the science underpinning them, both as vehicles to legitimize interventionist measures, and thus a "welfare dictatorship," and as effective instruments to gain a competitive edge in the race between diametrically opposed political systems.<sup>7</sup>

However, vaccinations also highlighted distinct commonalities in ideas, policies, and practices on the European continent. Vaccines offered an "exceptional technology" that, in principle, could move across borders and ideologies because of its strong association with humanitarian aid and the common good. While vaccine knowledge relating to manufacture, efficiency, and efficacy was defined within specific societal, economic, and ideological contexts, distribution and use were widely imagined within an international framework to benefit all of humankind.

At the same time, as we have seen, health politics were never far away. In both East and West, state-controlled vaccine programs became instruments of social engineering to improve the health of populations, strengthen the social order between the state and individuals, and ultimately advance different utopian models of modern society. In addition, the fear of epidemics could accelerate collaboration at the highest levels, through international conferences or the WHO, in order to advance knowledge exchanges in medicine and science across the "Nylon Curtain"—the more permeable version of the so-called Iron Curtain—and develop effective treatments against infectious diseases in postwar European societies.8 Vaccines and their delivery, unlike any other collective health initiatives, became an integral part of postwar biopolitics, reflecting political, economic, and ideological commitments in medicine and science.9

### **Vaccine Populism**

If past vaccine wars are instructive, then the current malaise in international collaboration may be less novel, and less threating to the world order, than a cursory assessment might suggest. Postwar history teaches us that vaccine politics are local and informed by factors such as mistrust of elites, nativism, fears of financial ruin, and skepticism about both the disease and the interventions. Leaders have used

these widely varying domestic sentiments about the pandemic in different ways for political ends. The resulting "vaccine populism" not only builds on the idea of nationalism and (right-wing) populism but has also led to conflicting national narratives and (costly) confusion for individuals and communities in places such as Hungary. Some countries' leaders, like Brazil's Jair Bolsonaro, Donald Trump in the United States, and Vladimir Putin in Russia, have been or were absent without leave, but other populist leaders, like Orbán in Hungary and President Xi Jinping in China, have taken charge, whether for good or ill. Intensified government surveillance that may well outlast the pandemic is welcomed in China, but not in many other hard-hit countries. Bolsonaro has rejected vaccines in general but specifically attacked one company whose product is supported by a political rival.<sup>10</sup> The European Union has alleged that China and Russia are running online disinformation campaigns to undermine trust in Western vaccines, expertise, and institutions. 11 Following Hungary and Slovakia's unilateral Sputnik V deals, observers have highlighted Russia's attempt to plant the flag on the vaccine as another form of hybrid warfare to sow distrust and division within the West, with a U.S.-based think tank recently claiming that "Sputnik V has become a tool of soft power for Russia."12 Some see the Russian vaccine as a "weapon of geopolitical influence"; others, like France's foreign minister, have characterized it as "a means of propaganda and aggressive diplomacy."13 Responding to the allegations, the official Sputnik V Twitter account claimed the moral high ground by stating that the "politicisation of vaccines is unethical and costing lives."14 In yet another blow to the European Union, some European states have considered going their own ways and signing contracts with Russia for Sputnik V, provided the European Medicines Agency approves the vaccines, which it has not done so far. 15

Attempts by some populist leaders to target Brussels as a perceived "European Leviathan" that aims to suppress national cultures and the freedom of individuals has gained traction in regions where unemployment and frustration over Europe's handling of the pandemic have been skyrocketing. In the rapidly vaccinating United Kingdom, Brexiteers, wounded by supply-line snags that looked to be blamed on Britain's poorly orchestrated departure from the European Union, suddenly found themselves at a propaganda advantage. In another twist, those who previously argued for a smaller state and less funding for international organizations have now vilified the European Union and the (vastly underfunded) WHO for their failure to implement robust interventionist measures. International organizations—a fundamental pillar of the postwar social order—have faced unprecedented criticism, whether justified or not. And yet, however difficult their journey may be, they hold one of the most important keys to success: only through international collaboration will the "family of nations" eventually beat the pandemic.

The current debates about and fights for the vaccination of different populations in the world reflect and reinforce

political front lines, exacerbating preexisting forms of discrimination, nativism, and xenophobia in many countries. Although overcoming a global crisis such as the Covid-19 pandemic requires wide-ranging international cooperation, it seems that, in many parts of the world, the crisis is regarded as a new arena of competition and power accumulation, in which political messages about strong government and political alliances are being reaffirmed.

The European Union benevolently wanted to prevent the potential political conflicts and competition between European states by initiating a system of EU-level contracts for providing vaccinations to European citizens. Contrary to these expectations, unwelcome tension arose between the European Union and the post-Brexit United Kingdom about the production and trade of vaccines. Moreover, many European countries that were hit hardest by the pandemic considered the supply of these vaccines too slow. The Hungarian government, for example, which has been criticized by the European Commission for not meeting ruleof-law standards, is eager to demonstrate the inadequacy of the European vaccination program and to emphasize that, without help from the East, vaccination of its population would not go fast enough. In Poland, by contrast, the government has been criticized for refusing to uphold the independence of the judiciary and for transforming the media into a state propaganda machine. The country thus finds itself in a similar situation regarding its relationship to the European Union. However, the legacy of the Soviet Union still looms large in the collective Polish consciousness, making it impossible for the authorities to consider the import of Russian vaccines.

Finally, in Slovakia, Prime Minister Igor Matovič's nationwide testing program did not achieve the expected success in the fight against Covid-19 (in what was already one of the countries with the highest incidence in the third wave, along with the Czech Republic and Hungary), but the crisis was worsened by the government's decision to override the objections of its coalition partner and secretly purchase two million doses of the Russian Sputnik V vaccine that had not yet been approved by EU regulators. Following a wave of public criticism from members of the governing coalition for having offended the country's European partners and with doubts being raised in EU capitals about Slovakia's "pro-Western orientation," Matovič had to resign at the end of March 2021, leading to further political instability at a crucial juncture in the pandemic. 16

It seems that, while we live in the twenty-first century, able to observe the unprecedented rapid response of science and biotechnology in the fight against the pandemic, the political reaction to the emergency harks back to ideologies that created so much suffering in the world in the nineteenth and twentieth centuries: nationalism and nativist populism. The emergence of vaccine nationalism and vaccine populism during a global crisis, and of latent and overt eugenic policies that overlook the most vulnerable, demonstrate that the politicization of medical science can impede

the pooling of resources and expertise through international cooperation.

### **Health Data Surveillance and Civil Liberties**

The pandemic has also seen a rise in greater health data surveillance, which has gone hand in hand with the suspension of civil liberties. The differences between the implementation of necessary and temporary restrictions on some civil liberties showed many different patterns. Although Europe developed a strict data protection regime before the pandemic, it seems that significant alterations were subsequently implemented between its member states, amounting to abuse of the emergency health situation and the use of surveillance to undermine the right to privacy. Introducing surveillance measures is made easier for governments because citizens in many places are ready and willing to give up aspects of their privacy for the sake of collective safety. Citizens' movements have been monitored and restricted, and health care data such as polymerase chain reaction (PCR) test results, relevant medical conditions, and now vaccination status have to be communicated to authorities. The European Commission has been working with member states in the eHealth Network (a voluntary network connecting national authorities responsible for using electronic information and communication technologies for healthrelated issues) on the interoperability of vaccination certificates, 17

Moreover, the issuing of "green certificates" or "immunity certificates" linked to ID and passport numbers in places such as Hungary and Israel introduces a new type of health surveillance and identity in European societies. The U.S. administration has ruled out such passports. The U.K. government, though, has recently commissioned a Swiss-based consultancy company to assess public attitudes, based on "focus group research" in relation to the introduction of "Covid certificates" and "domestic Covid passports. The documents would include apparently time-limited personal data about vaccination status, a negative Covid test, and Covid antibodies. They would give people permission to visit crowded places such as theater and music venues, and they could be made conditional for attending private gatherings such as weddings and funerals.

Concerned human rights and privacy lawyers see such measures as a thin edge of the wedge to introduce greater policing of health data in societies. Those in possession of these certificates will in the future enjoy greater freedom of movement within the European Union. Although, on the face of it, many of these measures seem necessary in the current crisis and may enjoy public support, the very use of this extended control may still trigger authoritarian reflexes. Indeed, in the United Kingdom, civil liberty groups and about seventy members of parliament have rung the alarm bells in relation to "domestic Covid passports." The debate between the so-called Western and Eastern vaccines may be intensified by the introduction of the European digital green

September-October 2021 HASTINGS CENTER REPORT 15

certificate, which does not involve those who have been vaccinated with Eastern vaccines that have not been registered by the European Medicines Agency.<sup>20</sup>

Officials have denied that their introduction is imminent, but there is growing concern that such documents would not only be impractical and enable greater health surveillance, including surveillance that could threaten future access to health and life insurances, but also open the door to discriminate against marginalized sections of society. According to Silkie Carlo, the director of Big Brother Watch, the implementation of this certificate would be the "first attempt at a segregation policy in Britain for decades."21 In Central and Eastern Europe, the shrinking private sphere has reminded many people of their experience with state authorities during the Communist period. Indeed, many governments, including those in Poland and Hungary, have overstepped strict necessity and used the pandemic as a pretext to further restrict the rights of women and LGBTQ communities.

That issues around health surveillance and data privacy go far beyond the current and postpandemic world is highlighted by the case of Palantir, a secretive California-based tech company with close links to military intelligence and law enforcement agencies in the United States and Europe.<sup>22</sup> When the company was floated on the U.S. stock exchange, it had little more than one hundred customers, many of them based in Europe. Ursula von der Leyen, the president of the European Commission, who had previously been Germany's minister for defense, has been seen holding private (unminuted) talks at the World Economic Forum with Palantir's eccentric chief executive officer, Alexander Karp, who has an estimated fortune of \$2.3 billion. In March 2020, as Covid-19 ripped through Europe, the Greek government signed a no-cost contract that gave Palantir unprecedented access to its citizens' personal data during the pandemic. Concerns have since ranged from dubious procurement practices, nonexistent data-impact assessments, failure to pseudonymize personal data, the inclusion of a controversial "improvement clause"—linked to the training of algorithms—and the violation of privacy legislation such as the General Data Protection Regulation, which since 2018 has governed the processing of personal data of citizens living in the European Union. While the Greek government terminated the collaboration with Palantir, an investigation by Greece's data protection authorities is ongoing.

The Palantir case shows how tech companies with access to the corridors of power are attempting to embed themselves into the postpandemic data world through high-end software packages, from policing, counterterrorism, and digital education to the health and vaccination status of citizens. Europe's leading data protection official acknowledges the risks associated with allowing companies such as Palantir access to personal data: "It doesn't make a difference if systems have been produced in the EU or outside. . . . But software produced by companies that might have connections with intelligence services of countries outside the

EU should be of special interest to us."<sup>23</sup> Given the growing dependency of EU agencies on externally sourced data platforms, and with the not-so-veiled threat of lawsuits hanging over EU-based tech firms, limiting access of U.S. companies to personal and commercial data in the European Union seems easier said than done.

What will the postpandemic world be like? We might find ourselves in a situation similar to that of the postwar period, which saw the rebuilding of societies around the world. After World War II, the devastating human losses and human rights violations called for a global effort to establish an international human rights regime. It is important to emphasize that this postwar human rights landscape was built on the global recognition of both classical liberties and the right to health and health care. In the neoliberal transformation of international relations, the right to health care was dismissed as an old-fashioned rhetorical statement that would only make the state more expensive. Now we may enter a post-neoliberal era in which the life and health of every human being again becomes important. Alternatively, vaccine populism may be one element in a shifting geopolitical environment that brings back memories of the Cold War division of Europe into East and West. This new cold war, however, will be waged, not with ideologies and economics, but with vaccines.

### **Acknowledgments**

The writing of this essay, which is part of the project Taming the European Leviathan: The Legacy of Post-War Medicine and the Common Good, was supported by the European Research Council under the European Union's Horizon 2020 research and innovation program (grant agreement no. 854503). We wish to thank an anonymous reviewer for many constructive comments and helpful suggestions, which were greatly appreciated. We also wish to thank William Studdert for proofreading the text on short notice.

- 1. W. Keegan, "The Brexit Elite Cannot Hope to Fool Us for Much Longer," *Guardian*, April 4, 2021.
- 2. Reuters staff, "Hungary Approves New Chinese Vaccine, and CoviShield for Emergency Use," *Reuters*, March 22, 2021, https://www.reuters.com/article/us-health-coronavirus-hungary-vaccines-idUSKBN2BE114.
- 3. See E. Manela, "Smallpox Eradication and the Rise of Global Governance," in *The Shock of the Global. The 1970s in Perspective*, ed. N. Ferguson et al. (Cambridge, MA: Harvard University Press, 2011), 251-62; E. Manela, "The Politics of Smallpox Eradication," *The Cambridge World History*, ed. J. McNeill and K. Pomeranz (Cambridge: Cambridge University Press, 2015), 258-82.
- 4. D. Vargha, "Vaccination and the Communist State: Polio in Eastern Europe," in *The Politics of Vaccination: A Global History*, ed. C. Holmberg et al. (Manchester, UK: Manchester University Press, 2017), 77-98; see also D. Vargha, *Polio across the Iron Curtain: Hungary's Cold War with an Epidemic* (Cambridge: Cambridge University Press, 2018).
- 5. Bundesarchiv [German Federal Archives], DC 20/2195, fol. 3-4, at https://www.bundesarchiv.de/DE/Content/Virtuelle-Ausstellungen/2020-05-07\_polio-impfstoff.html, in the virtual exhibition (*virtuelle Ausstellung*). See also S. Liskowsky, "Wenn der Impfstoff aus dem Osten kommt," MDR [Mitteldeutscher Rundfunk], March 2, 2021, https://www.mdr.de/zeitreise/impfen-

**16** HASTINGS CENTER REPORT

- ddr-sozialismus-100.html; "Polio-Impfung," *Der Spiegel*, July 19, 1961, pp. 59-60.
- 6. Bundesarchiv [German Federal Archives], DC20/2195, fol. 1-2, Winzer, Ministerium für Auswärtige Angelegenheiten der Deutschen Demokratischen Republik, an Willy Stoph, Stellvertreter des Ministerpräsidenten, June 30, 1961, https://www.bundesarchiv.de/DE/Content/Downloads/Virtuelle-Austellungen/Polio-Impfstoff/DC\_20\_2195\_1-2.pdf?\_\_blob=publicationFile.
- 7. K. H. Jarausch, "Care and Coercion: The GDR as Welfare Dictatorship," in *Dictatorship as Experience. Towards a Socio-cultural History of the GDR*, ed. K. H. Jarausch (New York: Berghahn Books, 2006), 47-69.
- 8. G. Péteri, "Nylon Curtain: Transnational and Transsystemic Tendencies in the Cultural Life of State-Socialist Russia and East-Central Europe," *Slavonica* 10, no. 2 (2004): 113-23.
- 9. The authors wish to thank the anonymous reviewer for many constructive comments and suggestions.
- 10. H. Traiano and T. McCoy, "Brazil Battles Coronavirus with a Chinese Vaccine Even the Chinese Concede Could Be Better," *Washington Post*, April 15, 2021.
- 11. K. Connolly, "German Minister Defies EU by Saying He Wants Russia to Supply Sputnik Vaccine," *Guardian*, April 8, 2021.
- 12. J. Henley, "Is Russia's COVID Vaccine Anything More Than a Political Weapon?," *Guardian*, April 30, 2021.
- 13. Ibid. See also A. Higgins, "Russian Attempts to Expand Sputnik Vaccine Set Off Discord in Europe," *New York Times*, May 2, 2021.
- 14. Henley, "Is Russia's COVID Vaccine Anything More Than a Political Weapon?"
- 15. Ibid. See also "Human Regulatory: Covid-19 Vaccines," European Medicines Agency, August 6, 2021, https://www.ema.

- europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/covid-19-vaccines.
- 16. S. Mortkowitz, "Slovak Prime Minister Igor Matovič Steps Down over Vaccine Crisis," *Politico*, March 28, 2021, https://www.politico.eu/article/1657555/; A. Noori Farzan, "Slovakia's Prime Minister Is the First World Leader to Step Down over COVID Controversy," *Washington Post*, March 29, 2021.
- 17. European Commission, "Proposal for a Regulation of the European Parliament and of the Council on a Framework for the Issuance, Verification and Acceptance of Interoperable Certificates on Vaccination, Testing and Recovery to Third-Country Nationals Legally Staying or Legally Residing in the Territories of Member States during the COVID-19 Pandemic (Digital Green Certificate)," accessed April 13, 2021, https://ec.europa.eu/info/sites/info/files/en\_green\_certif\_tcn\_home\_reg140final.pdf; "eHealth: Digital Health and Care," European Commission, accessed August 2, 2021, https://ec.europa.eu/health/ehealth/home\_en.
- 18. "COVID: US Rules Out Federal Vaccine Passports," BBC, April 6, 2021, https://www.bbc.com/news/world-us-canada-56657194.
- 19. P. Walker and V. Dodd, "Covid Certificates on the Cards for Use in England since December," *Guardian*, April 4, 2021.
- 20. European Commission, "Coronavirus: Commission Proposes a Digital Green Certificate," press release, March 17, 2021, https://ec.europa.eu/commission/presscorner/detail/en/IP\_21\_1181.
- 21. Walker and Dodd, "Covid Certificates on the Cards for Use in England."
- 22. D. Howden et al., "Seeing Stones: Pandemic Reveals Palantir's Troubling Reach in Europe," *Guardian*, April 2, 2021.

23 Ibio

September-October 2021 HASTINGS CENTER REPORT 17