## 1

#### 1] Interpretation: The affirmative must specify which intellectual property rights they reduce

#### Intellectual Property is a vague, meaningless term – there’s no normal means.

Chopra 18, Samir. “The Idea of Intellectual Property Is Nonsensical and Pernicious: Aeon Essays.” Aeon, Aeon Magazine, 12 Nov. 2018, aeon.co/essays/the-idea-of-intellectual-property-is-nonsensical-and-pernicious. Samir Choprais professor of philosophy at Brooklyn College of the City University of New York. He is the author of several books, including A Legal Theory for Autonomous Artificial Agents (2011), co-authored with Laurence White.//sid

In the United States, media and technology have been shaped by these laws, and indeed many artists and creators owe their livelihoods to such protections. But recently, in response to the new ways in which the digital era facilitates the creation and distribution of scientific and artistic products, the foundations of these protections have been questioned. Those calling for reform, such as the law professors Lawrence Lessig and James Boyle, free software advocates such as Richard Stallman, and law and economics scholars such as William Landes and Judge Richard Posner, ask: is ‘intellectual property’ the same kind of property as ‘tangible property’, and are legal protections for the latter appropriate for the former? And to that query, we can add: is ‘intellectual property’ an appropriate general term for the widely disparate areas of law it encompasses? The answer to all these questions is no. And answering the latter question will help to answer the former. Stallman is a computer hacker extraordinaire and the fieriest exponent of the free-software movement, which holds that computer users and programmers should be free to copy, share and distribute software source code. He has argued that the term ‘intellectual property’ be discarded in favour of the precise and directed use of ‘copyright’, ‘patents’, ‘trademarks’ or ‘trade secrets’ instead – and he’s right. This is not merely semantic quibbling. The language in which a political and cultural debate is conducted very often determines its outcome. Stallman notes that copyright, patent, trademark and trade secret law were motivated by widely differing considerations. Their intended purposes, the objects covered and the permissible constraints all vary. In fact, knowledge of one body of law rarely carries over to another. (A common confusion is to imagine that an object protected by one area of law is actually protected by another: ‘McDonald’s’ is protected by trademark law, not copyright law, as many consumers seem to think.) Such diversity renders most ‘general statements … using “intellectual property”… false,’ Stallman [writes](https://www.gnu.org/philosophy/not-ipr.en.html). Consider the common claim that intellectual property promotes innovation: this is actually true only of patent law. Novels are copyrighted even if they are formulaic, and copyright only incentivises the production of new works as public goods while allowing creators to make a living. These limited rights do not address innovations, which is also true of trademark and trade secret law. Crucially, ‘intellectual property’ is only partially concerned with rewarding creativity (that motivation is found in copyright law alone). Much more than creativity is ‘needed to make a patentable invention’, Stallman explains, while trademark and trade secret law are orthogonal to creativity or its encouragement. Clubbing these diversities under the term ‘intellectual property’ has induced a terrible intellectual error A general term is useful only if it subsumes related concepts in such a way that semantic value is added. If our comprehension is not increased by our chosen generalised term, then we shouldn’t use it. A common claim such as ‘they stole my intellectual property’ is singularly uninformative, since the general term ‘intellectual property’ obscures more than it illuminates. If copyright infringement is alleged, we try to identify the copyrightable concrete expression, the nature of the infringement and so on. If patent infringement is alleged, we check another set of conditions (does the ‘new’ invention replicate the design of the older one?), and so on for trademarks (does the offending symbol substantially and misleadingly resemble the protected trademark?) and trade secrets (did the enterprise attempt to keep supposedly protected information secret?) The use of the general term ‘intellectual property’ tells us precisely nothing. Furthermore, the extreme generality encouraged by ‘intellectual property’ obscuresthe specific areas of contention created by the varying legal regimes. Those debating copyright law wonder whether the copying of academic papers should be allowed; patent law is irrelevant here. Those debating patent law wonder whether pharmaceutical companies should have to issue compulsory licences for life-saving drugs to poor countries; copyright law is irrelevant here. ‘**Fair use’** is **contested in copyright** litigation; there is **no such notion in patent law**. ‘**Non-obviousness’** is **contested in patent law**; there is **no such** notion **in copyright law**. **Clubbing these diversities under the term ‘intellectual property’ has induced a terrible intellectual error**: **facile and misleading overgeneralisation**. Indiscriminate use of ‘intellectual property’ has unsurprisingly bred absurdity. Anything associated with a ‘creator’ – be it artistic or scientific – is often grouped under ‘intellectual property’, which doesn’t make much sense. And the widespread embrace of ‘intellectual property’ has led to historical amnesia. According to Stallman, many Americans have held that ‘the framers of the US Constitution had a principled, procompetitive attitude to intellectual property’. But Article 1, Section 8, Clause 8 of the US Constitution authorises only copyright and patent law. It does not mention trademark law or trade secret law. Why then does ‘intellectual property’ remain in use? Because it has polemical and rhetorical value. Its deployment, especially by a putative owner, is a powerful inducement to change one’s position in a policy argument. It is one thing to accuse someone of copyright infringement, and another to accuse of them of the theft of property. The former sounds like a legally resolvable technicality; the latter sounds like an unambiguously sinful act.

#### 2] Violation: they don’t

#### 3] Standards

#### a] Shiftiness – vague plan wording wrecks Neg Ground since it’s impossible to know which DAs link or which CPs are competitive since different IP’s have different implications – absent 1AC specification, the 1AR can squirrel out of links by saying they don’t effect a certain protection or they don’t reduce IP enough to trigger the link.

#### Independently vote Negative on Presumption since the Aff gets struck down for being void-for-vagueness since they don’t have an explanation of what is reduced or remaining after the Plan.

Singer 10 Bill Singer 9-13-2010 “Yo, Congress, Keep On Truckin' -- Can You Dig It?” <http://www.brokeandbroker.com/index.php?a=blog&id=554> (Bill Singer is a lawyer who represents securities-industry firms, individual registered persons, Wall Street whistleblowers, and defrauded public investors. For over three decades, Singer has represented clients before the American Stock Exchange, the New York Stock Exchange, the Financial Industry Regulatory Authority (formerly the NASD), the United States Securities and Exchange Commission, and in criminal investigations brought by various federal, state, and local prosecutors. Before entering the private practice of law, Singer was employed in the Legal Department of Smith Barney, Harris Upham & Co.; as a regulatory attorney with both the American Stock Exchange and the NASD (now FINRA); and as a Legal Counsel to Integrated Resources Asset Management. Singer was formerly Chief Counsel to the Financial Industry Association; General Counsel to the NASD Dissidents' Grassroots Movement; and General Counsel to the Independent Broker-Dealer Association. He was registered for a number of years as a Series 7 and Series 63 stockbroker.)//Elmer

All of which makes **it critical that** the **laws**, rules, and regulations of Wall Street be promulgated in an intelligible manner that **clearly sets forth** **what is allowed and what is prohibited**. What a provision was meant to say should be what it says -- there shouldn't be any guessing or uncertainty. Unfortunately, so much of what has been proposed as financial regulatory reform, and so much of what will likely emanate from the various agencies and commissions that will soon embark upon rulemaking, is vague. **If there is one thing** that **courts will not tolerate** **it is vagueness**. The **law books** are **filled with** agreements, contracts, rules, regulations, and **laws** **that have been struck down as void for vagueness**. I fear that much of FINREG may be headed for the same garbage can.

#### b] Topic Education – nuanced debates about IP requires specification since each form of IPR has specific issues related to it so generalization disincentivizes in-depth research. Topic Education outweighs since we only debate the topic for two months.

#### Fairness is a voter since it’s debate is a game so it’s a jurisdictional question and sequencing to evaluating any other argument in the debate.

#### Reductions Spec isn’t regressive – it’s a core discussion central to the literature, we’ve read a card proving predictability, and is a floor for topic debates.

#### [Paradigm Issues] –

#### [AT CX Checks] – CX doesn’t check - 1] Skews pre-round prep – key to in-depth clash, 2] Judges don’t flow CX, 3] Unverifiable and Irresolvable, 4] Skews CX Time since it forces me to clarify rather than pursue lines of argumentation, and 5] Allows them to change advocacy based on what my CX questions are which irreparably skews my Neg Strat.

#### [DTD] – Reduction is DTD since a] can’t drop an absence of something and b] it’s a necessary floor for debate-ability since the damage is irreparable.

#### [Competing Interps] – Reasonability is arbitrary and causes a race to the bottom of questionable argumentation.

#### [No RVI’s] – 1] Forces the 1NC to go all-in on Theory which kills substance education, 2] Encourages Baiting since the 1AC will purposely be abusive, and 3] Illogical – you shouldn’t win for not being abusive.

#### [Comes above 1AR Theory] – 1NC Theory outweighs on scope cause 1AC abuse effects every speech – we had to be abusive since the 1AC was abusive first.

## 2

#### The starting point of morality is practical reason.

#### 1] Bindingness: A theory is only binding when you can answer the question “why should I do this?” and not continue to ask “why”. Only practical reason provides a deductive foundation for ethics since the question “why should I be rational” already concedes the authoritative power of agency since your agency is at work. Bindingness ow its meta-ethical, so it determines what counts as a warrant for a standard, so absent grounding in some metaethical framework, their arguments aren’t relevant normative considerations

#### 2] Action theory: only evaluating action through reason solves since reason is key to evaluate intent, otherwise we could infinitely divide actions. For example: If I was brewing tea, I could break up that one big action into multiple small actions. Only our intention, to brew tea unifies these actions if we were never able to unify action, we could never classify certain actions as moral or immoral since those actions would be infinitely divisible.

#### And, reason must be universal –

#### [A] a reason for one agent is a reason for another agent. I can’t say 2+2=4 is true for me but not for you – that’s incoherent.

#### [B] any non-universalizable norm justifies someone’s ability to impede on your ends i.e. if I want to eat ice cream, I must recognize that others may affect my pursuit of that end and demand the value of my end be recognized by others. Only universality solves since universalizing a violation of freedom entails a violation of your own freedom, thus a recognizable violation appears also means universalizability acts as a side constraint on all other frameworks.

#### Thus, the standard is consistency with the categorical imperative’s system of equal and outer freedom. Prefer:

#### [1] Performativity—freedom is the key to the process of justification of arguments. Willing that we should abide by their ethical theory presupposes that we own ourselves in the first place. Thus, it is logically incoherent to justify the neg arguments/standard without first willing that we can pursue ends free from others.

#### [2] Resource disparities- Our framework ensures big squads don’t have a comparative advantage since debates become about quality of arguments rather than quantity - their model crowds out small schools because they have to prep for every unique advantage under each aff, every counterplan, and every disad with carded responses to each of them

### Offense

#### Reducing IP is a form of free-riding that fails the universality test, but also uses the creators of the medicine as means to an end.

Dyke 18 Dyke, Raymond. “The Categorical Imperative for Innovation and Patenting - IPWatchdog.com: Patents &amp; Patent Law.” IPWatchdog.com | Patents &amp; Patent Law, 1 Oct. 2018, www.ipwatchdog.com/2018/07/17/categorical-imperative-innovation-patenting/id=99178/.//dhsNJ

As we shall see, applying Kantian logic entails first acknowledging some basic principles; that the people have a right to express themselves, that that expression (the fruits of their labor) has value and is theirs (unless consent is given otherwise), and that government is obligated to protect people and their property. Thus, an inventor or creator has a right in their own creation, which cannot be taken from them without their consent. So, employing this canon, a proposed Categorical Imperative (CI) is the following Statement: creators should be protected against the unlawful taking of their creation by others. Applying this Statement to everyone, i.e., does the Statement hold water if everyone does this, leads to a yes determination. Whether a child, a book or a prototype, creations of all sorts should be protected, and this CI stands. This result also dovetails with the purpose of government: to protect the people and their possessions by providing laws to that effect, whether for the protection of tangible or intangible things. However, a contrary proposal can be postulated: everyone should be able to use the creations of another without charge. Can this Statement rise to the level of a CI? This proposal, upon analysis would also lead to chaos. Hollywood, for example, unable to protect their films, television shows or any content, would either be out of business or have robust encryption and other trade secret protections, which would seriously undermine content distribution and consumer enjoyment. Likewise, inventors, unable to license or sell their innovations or make any money to cover R&D, would not bother to invent or also resort to strong trade secret. Why even create? This approach thus undermines and greatly hinders the distribution of ideas in a free society, which is contrary to the paradigm of the U.S. patent and copyright systems, which promotes dissemination. By allowing freeriding, innovation and creativity would be thwarted (or at least not encouraged) and trade secret protection would become the mainstay for society with the heightened distrust.

#### IP protections are consistent with libertarian theories of property

Zeidman 16 Zeidman, Bob. “Why Libertarians Should Support a Strong Patent System - Ipwatchdog.com: Patents &amp; Patent Law.” IPWatchdog.com | Patents &amp; Patent Law, 5 Jan. 2016, www.ipwatchdog.com/2016/01/05/why-libertarians-should-support-a-strong-patent-system/id=64438/.//dhsNJ

Ayn Rand strongly supported patents. In her book “Capitalism: The Unknown Ideal,” she states: An idea as such cannot be protected until it has been given a material form. An invention has to be embodied in a physical model before it can be patented; a story has to be written or printed. But what the patent or copyright protects is not the physical object as such, but the idea which it embodies. By forbidding an unauthorized reproduction of the object, the law declares, in effect, that the physical labor of copying is not the source of the object’s value, that that value is created by the originator of the idea and may not be used without his consent; thus the law establishes the property right of a mind to that which it has brought into existence. Many libertarians believe that intellectual property, being intangible, is not real property. A formal libertarian definition of property is difficult to formulate, but we would say that property is that which can be produced or contribute to production. Intellectual property falls clearly within these constraints. Yet some libertarians complain that intellectual is not tangible and is defined by government regulation—the patent laws—such that it would not exist without government definition. Let us look at this argument closer. Land is unquestionably property in the minds of libertarians. Yet the land upon which a house is built was not created by the property owner. It was created by nature or God, depending on your inclination, but no one would claim it to be created by the owner, whereas intellectual property is unquestionably created by the inventor. And how far do property lines extend? Property lines are determined by local governments. One can argue that property lines are negotiated by owners and enforced by governments, but when we moved into our homes, there were no negotiations with surrounding property owners. And how far above ground and below ground do property rights extend? These limitations are definitely not negotiated with other property owners but are determined by laws enforced by governments. Patents also have limitations in terms of scope and time that are determined by government laws. One can see that limitations on patents are similar to those on physical property and in some respects are more closely connected to production. For these reasons, libertarians should recognize patents as they do other forms of property. As a secondary but important example, libertarians are generally concerned about government spying on private conversations. When the government captures a phone conversation, it is not physically taking property. It is simply copying intangible data that exists as a form of transient electrical signals. Copying does not involve removing the original—the phone conversation is not destroyed when it is copied. Yet libertarians recognize that this copying of intangible data is a kind of theft of property. Libertarians should thus be wary of making the argument that intangible patents cannot be property or they may lose their contrary argument that private conversations are personal property to be protected.

## Case

#### P and P negate

#### Statements false before true

#### Ought entails obligation-

#### IP has been successful to even creating covid vaccines in the first place, so it makes no sense to destroy what has worked

**Value Ingenuity, 20** [Value Ingenuity, (The Value Ingenuity project is telling the story of innovation, its roots, its impact, its social and moral imperatives, and the public policy prescriptions that will assure a continued upward trajectory for the generations to follow.

Our objective is to advance globally a shared purpose of mutual investment in sustainable innovation.)]. "WTO IP Waiver Would Undermine Covid Innovation." 10-2-2020, Accessed 8-5-2021. https://www.valueingenuity.com/2021/05/18/wto-ip-waiver-would-undermine-covid-innovation/ // duongie

A TRIPS waiver for vaccines would do nothing to help — and could in fact hurt — the effort to produce billions of vaccine doses and get them in arms. Supply of these high-tech products is ramping up quickly, with about 10 billion doses projected to be produced by the end of 2021 — we shouldn’t distract attention away from that all-important goal. IP is not a barrier to vaccine access. It already enabled the creation of three vaccines, in record-breaking time, that have received FDA authorization. IP is also safely facilitating international partnerships (275+ to date) to share technology and information more easily with trusted partners across borders. An IP waiver could lead to untested and unregulated copycats. Some nations are looking to manufacture sophisticated vaccines without permission, exacerbating the shortage of the critical materials (raw materials, tubing, vials etc.) and increasing vaccine hesitancy due to the development of unsafe products and medicines. The proposal jeopardizes U.S. manufacturing & jobs. Allowing other countries to take and commercialize American-made technologies conflicts with President Biden’s goal to build up American infrastructure and create manufacturing jobs. In the U.S. alone, biopharmaceutical companies support 4 million jobs across all 50 states, with many more across innovation ecosystems in labs, finance, and SMEs. Waiving IP undermines America’s leadership in the life sciences. We should not be forfeiting IP to countries looking to undermine America’s global leadership in biomedical technology and innovation. IP protections enabled decades of R&D by biopharmaceutical research companies, allowing them to move quickly and effectively against COVID-19. Business welcomes the Biden Administration’s support for the global vaccine program, COVAX. This type of program can have a significant positive, practical impact on global rollout of vaccines and therapies without disrupting the incredible IP-enabled progress that has been made to date to defeat the pandemic. Its effects will be even more effective as trade barriers are removed and all countries allow vaccines to be exported internationally. GOOD TO KNOW: Today 57% of all new medicines globally come from the United States with its world-class IP ecosystem, and private companies in the life sciences community make up more than 80% of the investment in the research and development of those new drugs. The U.S. biopharmaceutical industry directly and indirectly supports over 4 million American jobs. SCIENTISTS, ACADEMICS, ADVOCATES AND POLITICAL LEADERS SKEPTICAL OF WAIVING IP RIGHTS “The goal is noble, but the demand [for an IP waiver] is more slogan than solution … patents on vaccines are not the central bottleneck, and even if turned over to other nations, would not quickly result in more shots. This is because vaccine manufacturing is exacting and time-consuming. Look at the production difficulties encountered by Emergent BioSolutions, a vaccine manufacturer in Baltimore, where 15 million doses were contaminated. That was caught before the shots were distributed, but one can imagine the horrific consequences of a failure to maintain quality control elsewhere in the world.” WASHINGTON POST EDITORIAL BOARD, May 4, 2021 “The goal is noble, but the demand [for an IP waiver] is more slogan than solution … patents on vaccines are not the central bottleneck, and even if turned over to other nations, would not quickly result in more shots. This is because vaccine manufacturing is exacting and time-consuming. Look at the production difficulties encountered by Emergent BioSolutions, a vaccine manufacturer in Baltimore, where 15 million doses were contaminated. That was caught before the shots were distributed, but one can imagine the horrific consequences of a failure to maintain quality control elsewhere in the world.” WALL STREET JOURNAL EDITORIAL BOARD, May 6, 2021 “The U.S. decision to support a temporary waiver of intellectual-property protections for Covid-19 vaccines won’t end debate on the issue, much less end the pandemic. Reaching a formal agreement could take months and even then may not accelerate vaccine production; opposition from countries such as Germany could yet doom any compromise.” BLOOMBERG EDITORIAL BOARD, May 12, 2021 “The collaboration that’s happened in the midst of this pandemic I think points to the ways in which IP has actually not been a barrier, but a facilitator of critical, cutting-edge innovation […] I don’t think that waiving IP rights will suddenly enable other countries to ramp up the manufacturing of complex vaccines.” SEN. CHRIS COONS (D-DE), CSIS: April 22, 2021 “There are only so many vaccine manufacturers in the world […] people are very careful about the safety of vaccines […] The thing that is holding us back is not IP. There is no idle factory with regulatory approval that makes magically safe vaccines […] we have all the rights from the vaccine companies and the work is going at full speed” BILL GATES, Sky News: April 25, 2021 “There are enough manufacturers, it just takes time to scale up. And by the way, I have been blown away by the cooperation between the public and private sectors in the last year, in developing these vaccines.” ADAR POONAWALLA, CEO SERUM INSTITUTE OF INDIA, February 14, 2021 “These [vaccines] are complex to make so just waiving IP and patents isn’t going to help […] you can only get trade secrets and knowhow with the cooperation of the originator companies, and they don’t have the bandwidth to do this in every part of the world … the only immediate solution is for rich countries to donate or sell their surplus vaccine to COVAX or other countries.” JAYASHREE WATAL, GEORGETOWN LAW PROFESSOR & FORMER WTO IP COUNSELOR, April 22, 2021 “It is also unclear whether a waiver of IP rights will make a difference […] Furthermore, as others have pointed out, IP rights are only a piece of what is needed to produce vaccines. There is currently a global shortage of raw materials and proper manufacturing facilities.” SAPAN KUMAR, LAW FOUNDATION PROFESSOR OF LAW AT THE UNIVERSITY OF HOUSTON LAW CENTER, May 9, 2021 “This is technology that’s every bit as critical as munitions and encryption codes […] It’s a platform technology that can be used to make all manner of treatments going forward, including vaccines.” DAVID KAPPOS, FORMER U.S. PATENT AND TRADEMARK OFFICE FOR PRESIDENT OBAMA, April 22, 2021 “The notion that we would then turn around and go to the World Trade Organization and basically endorse a policy of DARPA-funded technology transfer to China is just inconceivable. You’re basically aiding and abetting China’s ‘Made in China 2025’ plans for technological dominance.” CLETE WILLEMS, FORMER SPECIAL ASSISTANT TO THE PRESIDENT FOR INTERNATIONAL TRADE, INVESTMENT, AND DEVELOPMENT, April 22, 2021.

#### Reducing IP wont work because countries don’t have the technology to make covid vaccines in the first place

Carla **Delgado, 5/25** [Carla Delgado, (Carla is a Filipino writer whose work has been published in Insider, Business Insider, Architectural Digest, Elemental, Observer, and more. She writes about a wide range of topics, but her interests lie in health & wellness, culture, and sustainability. Outside of writing, she is a theatre practitioner with several theatre credits under her belt.)]. "Experts Say Patent Waivers Aren't Enough To Increase Global Vaccination." Verywell Health, 5-25-2021, Accessed 8-5-2021. https://www.verywellhealth.com/covid-vaccine-patent-waivers-global-supply-5185669 // duongie

Why Waiving Patents Isn’t Enough to Speed Up Production Countries looking to produce COVID-19 vaccines face many logistical hurdles even if vaccine patents are waived. “Waiving intellectual property rights for COVID-19 vaccines is likely to only have a modest impact on global vaccine supply,” William Moss, MD, executive director of the International Vaccine Access Center at the Johns Hopkins Bloomberg School of Public Health, tells Verywell. “A vaccine IP waiver is not in itself likely to lead to increased vaccine production in less developed countries because much more needs to be in place to increase the global vaccine supply.” Lack of Manufacturing Capacity For several countries outside of the U.S. that have the necessary equipment to produce mRNA vaccines effectively and safely, the IP waiver can be of great help. However, many more countries lack this capacity, and this move still leaves them behind. “The majority of the world’s countries lack the capacity to produce and distribute COVID-19 vaccines, and especially at the scale required to get this pandemic under control,” Richard Marlink, MD, director of the Rutgers Global Health Institute, tells Verywell. “They need funding, manufacturing facilities, raw materials, and laboratory staff with the technological expertise required.” We've already seen what can go wrong with substandard vaccine manufacturing. In April, the Food and Drug Administration (FDA) inspected the Emergent BioSolutions factory in Baltimore and consequently shut down their production after concerning observations, which include:3 The factory was not maintained in a clean and sanitary condition. Waste handling was found to be inadequate because generated waste was transported through the warehouse before disposal, which can potentially contaminate other areas. Employees were seen dragging unsealed bags of medical waste from the manufacturing area across the warehouse. Peeling paint, paint flecks, loose particles/debris were observed. There were also damaged floors and rough surfaces that cannot be properly cleaned and sanitized. Employees were seen removing their protective garments where raw materials were staged for manufacturing. They reportedly spoiled about 15 million doses of the Johnson and Johnson COVID-19 vaccine, and more than 100 million doses are on hold as regulators inspect them for possible contamination.4 “Vaccines are complex biological products, much more complex than drugs, and need to be produced by manufacturers and in facilities with the highest quality control standards,” Moss says. “Adverse events associated with a poorly made or contaminated batch of vaccines would have a devastating impact on vaccine confidence.” Lack of Technology, Skills, and Raw Materials In a statement last October, Moderna announced that they will not enforce their COVID-19-related patents against those who will make vaccines during this pandemic.5 While waiving some vaccine patents may allow third-party manufacturers to make and sell COVID-19 vaccines, the transfer of skills and technology that will allow them to manage production isn't very simple. For instance, a spokesperson for Pfizer said that the Pfizer-BioNTech vaccine required 280 different components sourced from 86 suppliers across various countries. Manufacturing the vaccine would require highly specialized equipment and complex technology transfers.6 “Technology transfer also would need to be a critical component to expand vaccine manufacturing by other companies as an IP waiver is insufficient to provide the ‘know how’ needed to manufacture mRNA or adenovirus-vectored COVID-19 vaccines,” Moss says. “And supply chains for the reagents, supplies, and equipment would be needed.” Interested manufacturers would need to have the proper equipment to test the quality and consistency of their manufacturing. At present, the World Health Organization (WHO) has plans to facilitate the establishment of technology hubs to transfer "a comprehensive technology package and provide appropriate training" to manufacturers from lower- and middle-income countries.7 While waiving vaccine patents is necessary, it's likely not enough. Additionally, negotiations about it are still ongoing. Even though the U.S. supports the waiver of COVID-19 vaccine patents, other countries like the United Kingdom, Japan, and Germany oppose it.8 It's also important to remember that manufacturing vaccines is only one step of the process of vaccinating the global population—distributing it is yet another hurdle.