# 1AC

### 1AC - Framing

**The meta ethic should be moral pluralism. Prefer-**

#### 1] Empirics- Best studies prove pluralistic tendencies are inevitable

Polzler and Wright 19[Thomas Pölzler and Jennifer Cole Wright- “Empirical research on folk moral objectivism” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6686698/> NCBI. Published July 5th 2019] Dulles AS

Examining these studies' results more closely, however, makes it less clear whether this interpretation is appropriate (Pölzler, 2018b). Take again Goodwin and Darley's study. In this study, almost 30% of subjects' responses to the disagreement measure and almost 50% of their responses to the truth‐aptness measure fell on the option that the researchers took to be indicative of subjectivism (Goodwin & Darley, 2008, pp. 1347, 1351). Moreover, while some moral statements were dominantly classified as objective (e.g., the above statement about robbery), many others were dominantly classified as nonobjective (e.g., the stem cell research statement). This suggests that subjects in Goodwin and Darley's study may have actually favored what Wright, Grandjean, and McWhite (2013) called “metaethical pluralism,” i.e., they sometimes sided with objectivism and other times with nonobjectivism. More recent studies have by and large confirmed this hypothesis of folk metaethical pluralism. Wright et al. (2013) and Wright, McWhite, and Grandjean (2014), for example, replicated Goodwin and Darley's results, using the exact same measures, but letting subjects classify the presented statements as moral and nonmoral themselves. Objectivity ratings for statements that were dominantly self‐classified as moral varied between as little as 5% and as much as 85%. Research based on different measures yielded high proportions of intrapersonal variation as well (e.g., Beebe, 2014; Beebe, Qiaoan, Wysocki, & Endara, 2015; Beebe & Sackris, 2016; Fisher, Knobe, Strickland, & Keil, 2017; Goodwin & Darley, 2012; Heiphetz & Young, 2017; Wright, 2018; Zijlstra, forthcoming.

#### Ethical claims should be grounded in statistical or empirical proof- it’s the only way to verify the contextual value of any theory and is the basis for corroborating our argumentation.

#### 2] Resolvability- Thousands of years of metaethical debates have concluded in indecisiveness so a 45-minute debate would be unable to correctly resolve nebulous ethical disputes and identify the correct theory. Resolvability outweighs on jurisdiction since it’s a meta-constraint on the judge’s final jurisdiction.

#### 3] Root cause- The AC framework is the only way that one can recognize and solve the root cause of all violence – an affirmation of ethics which recognize others is key.

Burggraeve [http://www.staff.amu.edu.pl/~ewa/Burggraeve-Violence%20and%20the%20Vulnerable%20Face%20of%20the%20Other.pdf (Roger Burggraeve was born in Passendale, Flanders (Belgium), in 1942. Salesian of Don Bosco (priest). Licentiate in Philosophy (Rome, 1966). Doctorate in Moral Theology (Leuven, 1980). Associate Professor at the Faculty of Theology and Religious Studies, KU Leuven (1980-1988). Professor (Ordinarius) from 1988 till 2007; now Emeritus Professor.]

Strictly speaking, racism takes the view that one group of people is morally or culturally superior to another group, based on a hereditary difference in race. Racism considers the racial origin of an individual or a community as the factor determining not only the appearance but also the way of thinking and acting. Moreover, racism accords value to one race above all others, and one who is racist usually reckons himself among the superior race. According to racist thinking, people are considered in the ﬁrst place or even exclusively in terms of their belongingness to a different race, most often visible in color of skin and other physical features (ﬁgure, nose, eyes, and so forth). On the basis of these features, they are then judged and above all condemned. And these condemnations are in turn nourished and strengthened by all sorts of "images of the enemy” cast against the "other" race. For Levinas, it is clear that racism was incarnated in an "exceptional" way in the persecution of the Jews by the National Socialism of Hitler and his followers (AS 60), which he therefore designates as "the diabolical criminality of absolute evil” (CCH 82). In his work Mein Kampf, Hitler argued for the superiority of the so-called Aryan race, the race of the (Iber-mensch ["Superman”]. Only those who belonged to the "pure" Aryan race, who all the more so embodied this race purely, had the right to live and reproduce. The Nazis therefore not only developed ingenious, scientiﬁcally designed programs to "solve" the Jewish question (the Endlb’sung, or Shoah) by means of concentration camps and gas chambers (of which Auschwitz in Poland was only one, but the most famous). They also developed and enacted complex, extensive sterilization programs aimed speciﬁcally at the physically and mentally handicapped so that the Aryan race would not be stained by begetting "impure" children. And there were also the infamous euthanasia programs established in order to remove "gently" the incurably ill and mentally handicapped, who were thus less valuable and unnecessary members of the Aryan race. Because homosexuals did not contribute to the furthering of the pure Aryan race they were severely persecuted, and the gypsies were eradicated because they did not belong to the Aryan race and therefore represented a threat to its purity. In a Wider sense, one also speaks of racism when one recognizes and relates to others on the basis of their belonging to another culture, language group, or religion. As contemporary examples of this, we can point to the manner in which people today reject immigrants from the Arab world and wish to expel them because of their origin in another religion, speciﬁcally Islam and its related traditions. Or think of the long-standing suppression and discrimination against African Americans in the United States, many of whose ancestors were brought over from Africa as slaves. According to Levinas, the core of racism consists not in the denial of, or failure to appreciate, similarities between people, but in the denial of, or better said, failure to appreciate and value, people’s differences, or better still, the fundamental and irreducible otherness by which they fall outside of every genre and are thus “unique”: "Alterity ﬂows in no sense out of difference, to the contrary difference goes back to alterity” (VA 92). A racist relation wants to recognize and value only the "same," or one’s “own” [het eigene], and therefore excludes the "foreign." Out of self-defense, we are easily inclined to accept and consider positively only that which agrees with, or is "similar" to, ourselves. One finds the other embarrassing, threatening, and frightening. One therefore tries to expel him from oneself, to place him outside so that he can be considered as the "enemy" from whom one "may" defend oneself, and whom one may even "destroy" as what brings life and well-being under pressure, unless one can reduce him to oneself or make him a part of oneself. One wants to accept ”others” (or "strangers," or ”foreigners”) only to the extent that they belong to one’s own “genre” or “kind,” which is to say to one’s own blood and soil, to the same family, tribe, sex, clan, nation, church, club, or community, do the same work, have the same birthplace and date. One’s ”own” is praised and even divinized at the price of the "other," which is vilified. The “stranger” becomes the scapegoat on whom we blame all of our problems and worries. One accepts differences only insofar as they are a matter of accidental particularities or specificities within a same genre or basic design, in which individuals differ from one another within a same “sort” only very relatively (for example, character, taste, intellectual level), and in which their deeper afﬁnity is not at all tested (VA 97). Against this background, it is clear that for Levinas anti-Semitism, as a specific and advanced form of racism, takes aim at the Jew as the intolerable other. For anti-Semitic thinking and sentiment, the Jew is simply the enemy, just as for every racism the other is the enemy as such, that is to say not on the basis of personality, one or another character trait, or a specific act considered morally troublesome or objectionable, but due only to his very otherness. In anti-Semitism, the Jew, as "other," is always the guilty one. It is never "oneself," the embodiment of the "same" that not only arranges everything around itself but also profiles itself as principle of meaning and value (CAJ 77—79).From this perspective on racism as rejection of the other, it appears, according to Levinas, that racism is not a rare and improbable phenomenon existing in the heart and thought of only some "perverse" people that has nothing to do with us. Insofar as one is, according to the spontaneous dynamic of existing, or conatus essendi, directed toward the "same," toward maintaining and fortifying one’s ”own”—all such as I have just sketched it—one must be considered "by nature” potentially racist, though of course without being "predestined" for it. In itself, this admits no question of psychological or pathological deviation. According to Levinas, this implies that one cannot simply dispense with the racism of Hitler and the Nazis, in contrast to something instead occurring only once, as a wholly distinct and incomparable phenomenon, at least if one views it not quantitatively but qualitatively, which is to say in terms of its roots and basic inspiration. In an attempt to hold open a pure—in fact, Manichean—distinction between "good" (us) and "bad" (the ”others”), thus keeping oneself out of range of the difficulties in question, it happens all too often that Hitlerism is described as something completely unique that has nothing in common with the aims and affairs of the common mortal. The perspective of Levinas shows that Hitlerism, with its genocide and other programs of eradication, is only a quantitative extension, that is to say a consistent, systematic, and inexorably reﬁned outgrowth of racism in its pure form, one that, in its turn, represents a concretization of the effort of existing, which, as the reduction of the other to the same, is the nature of our existence (without,on the other hand, our being abandoned to this nature as a fatality, since as ethical beings we can overcome it). No one is invulnerable; any of us is a potential racist, and at least sometimes a real racist. Racism, like Hitlerism, does not occur by chance, or by an accidental turn. Nor is it an exceptional perversion occurring in a group of psychologically disturbed people. It is a permanent possibility woven into the dynamic of our very being, so that Whoever accedes to and lives out the dynamic of his own being inevitably extends racism in one or another form (AS 60—61). We can no longer blame racism and anti-Semitism on "others," for both their possibility and the temptation to them are borne in the dynamic of our ohm being: as "non-reciprocal determination of the other” (T I 99), which is precisely the kernel of our freedom (TI 97). It is specifically to unmask this racist violence, and all forms of violence as modalities of denial of the other as other, that Levinas discerns the basic ethical norm in the commandment mentioned and explicated above, “Thou shall not kill,” which is to say in the commandment to ;respect the otherness of the other. In committing to the possible overcoming of evil, and of racism in particular, through the ethical choice for the good, Levinas certainly realizes how vulnerable this "overcoming" of evil is. By rejecting the idea that every objective system, through its ironclad, mechanistic laws and coerciveness, might be able to render evil impossible forever, and instead basing everything on the ethical call to the good, he makes clear that abuse, violence, and the racist exclusion and elimination of the other are constantly possible and can never be definitively overcome. In ethics, there is no eschatology, in the sense of a guaranteed "better world” or "world without evil.” There is only the ”good will” that must always prove itself in a choice against evil that is neither evident nor easy. Only in this way can there be a good future and justice for the other: only through ethical vigilance with respect to all forms of violence, tyranny, hate, and racism, and a society that nurtures in both our upbringing and education a “sensibility” for the other as “stranger.” Such a sensitivity takes in full seriousness the ethical essence of the human person, and serves always to put us back on the path to a culture "where the other counts more than I do,” and where the most foreign enjoys our complete hospitality.

#### Thus, the standard is promoting pragmatic deliberation. Prefer-

#### 1] Value Pluralism- Other ethical theories rely on minimalistic criteria as their foundation, our framework resolves this by using these criteria to better inform our judgments LaFollete 2K "Pragmatic Ethics" [Hugh LaFollette](http://www.hughlafollette.com/index.htm) In [Blackwell Guide to Ethical Theory](http://www.hughlafollette.com/papers/b-guide.htm) 2000. Hugh LaFollette is Marie E. and Leslie Cole Professor in Ethics at the University of South Florida St. Petersburg. He is editor-in-chief of The International Encyclopedia of Ethics. <https://www.hughlafollette.com/papers/b-guide.htm> Dulles AS

Pragmatic ethics takes a more aggressive approach, insisting that mankind is responsible for determining the best ethical system possible, which will be refined as new discoveries are made. Put simply; truth does not exist in some abstract realm of thought independent of social relationship or actions; instead, the truth is a function of an active … Pragmatism, according to William James, is derived from the Greek word pragma, which means action and serves as the basis of our English words practical and practice. Pragmatism originated in the United States around 1870, and now presents a growing third alternative to both analytic and Continental philosophical traditions worldwide. 1 - Acceptance . Ethics is a branch of philosophy that is responsible for studying the principles that govern the conduct of an individual. Employs criteria, but is not criterial The previous discussions enable us to say more precisely why pragmatists reject a criterial view of morality. Pragmatism's core contention that **practice** is primary in philosophy **rules out** the hope of logically prior **criteria**. Any meaningful criteria evolve from our attempt to live morally – in deciding what is the best action in the circumstances. **Criteria** are not discovered by pure reason, and they **are not fixed**. As ends of action, they are always revisable. **As we obtain new evidence** about ourselves and our world, and as our worlds changes, **we find** that **what was appropriate** for the old environment **may not be conducive to** survival in **the new** one. A style of teaching that might have been ideal for one kind institution (a progressive liberal arts college) at one time (the 60s) may be wholly ineffective in another institution (a regional state university) at another time (the 80s). But that is exactly what we would expect of an evolutionary ethic. Neither could criteria be complete. **The moral world is complex and changeable. No** set of **criteria could give us univocal answers about how we should behave in all circumstances.** If we cannot develop an algorithm for winning at chess, where there are only eighteen first moves, there is no way to develop an algorithm for living, which has a finitely large number of "first moves." Moreover, while the chess environment (the rules) stays constant, our natural and moral environments do not. We must adapt or fail. While there is always one end of chess -- the game ends when one player wins – the ends of life change as we grow, and **as** our **environments change**. Finally, we cannot resolve practical moral questions simply by applying criteria. We do not make personal or profession decisions by applying fixed, complete criteria. Why should we assume we should make moral decisions that way? Appropriates insights from other ethical theories Nonetheless, there is a perfectly good sense in which a pragmatic ethic employs what we might call criteria, but their nature and role dramatically differ from that in a criterial morality (Dewey 1985/1932) . **Pragmatic criteria** are not external rules we apply, but **are tools we use in making informed judgements**. They embody learning from previous action, they express our tentative efforts to isolate morally relevant features of those actions. These **emergent criteria can become integrated into our habits,** thereby **informing** the **ways** that **we react to**, think about, and imagine **our worlds** and our relations to others. This explains why pragmatists think other theories can provide guidance on how to live morally. Standard moral theories err not because they offer silly moral advice, but because they misunderstand that advice. **Other** moral **theories can** help us **isolate** (and habitually focus on) **morally relevant features** of action. And pragmatists take help wherever they can get it. Utilitarianism does not provide an algorithm for deciding how to act, but it shapes habits to help us "naturally" attend to the ways that our actions impact others. Deontology does not provide a list of general rules to follow, but it sensitizes us to ways our actions might promote or undermine respect for others. Contractarianism does not resolve all moral issues, but it sensitizes us to the need for broad consensus. That is why it is mistaken to suppose that the pragmatist makes specific moral judgements oblivious to rules, principles, virtues, and the collective wisdom of human experience. **The pragmatist absorbs these insights** into her habits, **and** thereby **shapes how she habitually responds,** and how she habitually deliberates when deliberation is required. This also explains why criterial moralities tend to be minimalistic. They specify minimal sets of rules to follow in order to be moral. Pragmatism, on the other hand, like virtue theories, is more concerned to emphasize exemplary behavior – to use morally relevant features of action to determine the best way to behave, not the minimally tolerable way

#### 2] Materiality- Our framework moves away from abstraction and understands knowledge as changing in order to base social change and revision of ideas. Glaude 7’ Eddie S. (Eddie S. Glaude Jr. is the chair of the Center for African-American Studies and the William S. Tod Professor of Religion and African-American Studies at Princeton University.) In a Shade of Blue : Pragmatism and the Politics of Black America. University of Chicago Press, 2007. EBSCOhost. (5-7) Bracketed for grammer. Dulles AS

In a Shade of Blue is my contribution to the tradition I have just sketched. My aim is to think through some of the more pressing conceptual problems confronting African American political life, and I do so as a Deweyan prag-matist. I should say a bit about what I mean by this self-description. John Dewey thought of philosophy as a form of cultural and social criticism. He held the view that **philosophy**, properly understood as a mode of wis-dom, ought to aid us in our efforts to overcome problematic situations and worrisome circumstances. The principal charge of the philosopher, then, **is to deal with the problems of human beings**, not simply with the problems of philosophers. For Dewey, over the course of his long career, this involved bridging the divide between science, broadly understood, and morals—a divide he traced to a conception of experience that has led philosophers over the centuries to tilt after windmills. Dewey declared, “The problem of restoring integration and co-operation between man’s beliefs about the world in which he lives and his beliefs about values and purposes that should direct his conduct is the deepest problem of any philosophy that is not isolated from life.”9Dewey bases this conclusion on several features of his philosophy: (1) anti foundationalism, (2) experimentalism, (3) contextualism, and (4) soli-darity.10 Antifoundationalism, of course, is the rejection of foundations of knowledge that are beyond question. Dewey, by contrast, understands **knowledge** to be **the fruit of our undertakings as we seek “the enrichment of our immediate experience through the control over action** it exercises.”11He insists that **we turn our attention** from supposed givens **to** actual consequences, **pursuing a future** fundamentally **grounded in values shaped by experience** and realized in our actions. This view makes clear the experimental function of knowledge. Dewey emphasized that knowledge entails efforts to control and select future experience and that we are always con-fronted with the possibility of error when we act. **We** experiment or **tinker, with the understanding that all facts are fallible** and, as such, occasionally afford us the opportunity for revision.12Contextualism refers to an understanding of beliefs, choices, and actions as historically conditioned. Dewey held the view that inquiry, or the pursuit of knowledge, is value-laden, in the sense that we come to problems with interests and habits that orient us one way or another, and that such pursuits are also situational, in the sense that “knowledge is pursued and produced somewhere, some when, and by someone.”13Finally, **solidarity captures** the associational and cooperative dimensions of Dewey’s thinking. Dewey conceives of his **pragmatism as “an instrument of social improvement**” aimed principally at expanding democratic **life and broadening the ground of individual self-development.**14Democracy, for him, constitutes more than a body of formal procedures; it is a form of life that requires constant attention if we are to secure the ideals that purportedly animate it. Individuality is understood as developing one’s unique capacities within the context of one’s social relations **and** one’s community. The formation of the democratic character so important to our form of associated living involves, then, **a** caring **disposition toward the plight of our fellows** and a watchful concern for the well-being of our democratic life.

#### 3] Deliberation is procedural not substantive, which means that we are first concerned with the decision-making procedure of deliberation and then evaluation of what impacts matter most. To clarify, consequences are a sequencing question. Serra 2

BY WAY OF CONCLUSION: As LaFollette presents it, the key to understanding pragmatist ethics is that it is not an ethical theory per se, but rather it is an anthropology, a way of understanding the human being and his moral action. Therefore, pragmatist ethics in reality does not propose a new ethical theory, but rather “reconstructs” through a new prism the basic intuitions of the best ethical theories. The fundamental element on which the attention of pragmatist ethics centers is deliberation. **Deliberation is not directly responsible for directing action, but** only **does so indirectly, by** means of a critique of past actions, **the effort to** correct or **reinforce certain habits** and mental experiments that each actor performs in order to determine his own future conduct, and even to determine in a general manner the way in which one wishes to live one’s life (or, what amounts to the same thing, the type of person one wishes to be). **The task of a pragmatist** ethics, therefore**, is not to provide final solutions, but** rather to indicate that it is **only** via **the testing and communication of experiences that** the **superiority** of **one** moral **idea** over another **can be demonstrated**. In this sense, one of the principal missions of any given version of pragmatist ethics is to indicate some general manner in which habits can be acquired which, later, will facilitate personal deliberation – both internal and external – in the broad variety of circumstances which make up the moral life.

#### 4] Permissibility and presumption affirm- A] we presume statements to be true unless proven false B] All statements of truth rest upon other assumptions, so if we presume everything false, then we can never prove anything true, including the statement presumption negates C] epistemics - we wouldn’t be able to start a strand of reasoning since we’d have to question that reason.

#### 5] Empirics- Quantum superposition proves different ethics can exist simultaneously.

MIT ’19 (Emerging Technology from the arXiv archive page; Covers latest ideas from blog post about arXiv; 03/12/2019; “Emerging Technology from the arXiv archive page”; <https://www.technologyreview.com/2019/03/12/136684/a-quantum-experiment-suggests-theres-no-such-thing-as-objective-reality/>; *MIT Technology Review*; accessed: 11/19/2020; MohulA)

Back in 1961, the Nobel Prize–winning physicist Eugene Wigner outlined a thought experiment that demonstrated one of the lesser-known paradoxes of quantum mechanics. The experiment shows how the strange nature of the universe allows two observers—say, Wigner and Wigner’s friend—to experience different realities. Since then, physicists have used the “Wigner’s Friend” thought experiment to explore the nature of measurement and to argue over whether objective facts can exist. That’s important because scientists carry out experiments to establish objective facts. But if they experience different realities, the argument goes, how can they agree on what these facts might be? That’s provided some entertaining fodder for after-dinner conversation, but Wigner’s thought experiment has never been more than that—just a thought experiment. Last year, however, physicists noticed that recent advances in quantum technologies have made it possible to reproduce the Wigner’s Friend test in a real experiment. In other words, it ought to be possible to create different realities and compare them in the lab to find out whether they can be reconciled. And today, Massimiliano Proietti at Heriot-Watt University in Edinburgh and a few colleagues say they have performed this experiment for the first time: they have created different realities and compared them. Their conclusion is that Wigner was correct—these realities can be made irreconcilable so that it is impossible to agree on objective facts about an experiment. Wigner’s original thought experiment is straightforward in principle. It begins with a single polarized photon that, when measured, can have either a horizontal polarization or a vertical polarization. But before the measurement, according to the laws of quantum mechanics, the photon exists in both polarization states at the same time—a so-called superposition. Wigner imagined a friend in a different lab measuring the state of this photon and storing the result, while Wigner observed from afar. Wigner has no information about his friend’s measurement and so is forced to assume that the photon and the measurement of it are in a superposition of all possible outcomes of the experiment. Wigner can even perform an experiment to determine whether this superposition exists or not. This is a kind of interference experiment showing that the photon and the measurement are indeed in a superposition. From Wigner’s point of view, this is a “fact”—the superposition exists. And this fact suggests that a measurement cannot have taken place. But this is in stark contrast to the point of view of the friend, who has indeed measured the photon’s polarization and recorded it. The friend can even call Wigner and say the measurement has been done (provided the outcome is not revealed). So the two realities are at odds with each other. “This calls into question the objective status of the facts established by the two observers,” say Proietti and co. That’s the theory, but last year Caslav Brukner, at the University of Vienna in Austria, came up with a way to re-create the Wigner’s Friend experiment in the lab by means of techniques involving the entanglement of many particles at the same time. The breakthrough that Proietti and co have made is to carry this out. “In a state-of-the-art 6-photon experiment, we realize this extended Wigner’s friend scenario,” they say. They use these six entangled photons to create two alternate realities—one representing Wigner and one representing Wigner’s friend. Wigner’s friend measures the polarization of a photon and stores the result. Wigner then performs an interference measurement to determine if the measurement and the photon are in a superposition. The experiment produces an unambiguous result. It turns out that both realities can coexist even though they produce irreconcilable outcomes, just as Wigner predicted. That raises some fascinating questions that are forcing physicists to reconsider the nature of reality. The idea that observers can ultimately reconcile their measurements of some kind of fundamental reality is based on several assumptions. The first is that universal facts actually exist and that observers can agree on them. But there are other assumptions too. One is that observers have the freedom to make whatever observations they want. And another is that the choices one observer makes do not influence the choices other observers make—an assumption that physicists call locality. If there is an objective reality that everyone can agree on, then these assumptions all hold. But Proietti and co’s result suggests that objective reality does not exist. In other words, the experiment suggests that one or more of the assumptions—the idea that there is a reality we can agree on, the idea that we have freedom of choice, or the idea of locality—must be wrong. Of course, there is another way out for those hanging on to the conventional view of reality. This is that there is some other loophole that the experimenters have overlooked. Indeed, physicists have tried to close loopholes in similar experiments for years, although they concede that it may never be possible to close them all. Nevertheless, the work has important implications for the work of scientists. “The scientific method relies on facts, established through repeated measurements and agreed upon universally, independently of who observed them,” say Proietti and co. And yet in the same paper, they undermine this idea, perhaps fatally. The next step is to go further: to construct experiments creating increasingly bizarre alternate realities that cannot be reconciled. Where this will take us is anybody’s guess. But Wigner, and his friend, would surely not be surprised.

### 1AC – Offense

#### 1] Reducing IP is a method of global solidarity by manifesting intra-country cooperation.

Jecker and Atuire 7/7 [Nancy S Jecker (professor of bioethics and philosophy at the University of Washington School of Medicine, Department of Bioethics and Humanities) and Caesar A Atuire (PhD in Philosophy from the Athenaeum Regina Apostolorum, Rome, Lecturer in the Department of Philosophy and Classics at the University of Ghana, Legon). “What’s yours is ours: waiving intellectual property protections for COVID-19 vaccines”. Journal of Medical Ethics. July 7 2021. Accessed 7/22/21. <https://jme.bmj.com/content/early/2021/07/06/medethics-2021-107555> //Xu]

We turn next to positive ethical arguments for temporarily waiving IP protections, which appeal to the values of globally solidarity and corporate responsibility. Global solidarity underscores that during the COVID-19 pandemic, each nation’s interests are entwined with the interests of every other.22 Just as it is impossible for any nation standing alone to address the threat to human health climate change raises, it is impossible for any single nation to meet the challenge that COVID-19 and future pandemics present. Instead, humanity must stand together. In the past, nations have failed to do so. The epidemic of HIV/AIDS in Africa illustrates. Shamefully, it took nearly a decade for the first antiretroviral drugs to reach the African continent, even though Africa was the hardest hit region and antiretroviral drugs provided 90% mortality reduction. Although the US government was an early investor in research that produced antiviral drugs for HIV, distribution was controlled by big pharmaceutical companies driven by profit. The USA and other wealthy countries repeated this mistake during the COVID-19 pandemic, supporting vaccine developers without requiring technology transfers and donations to COVAX (the multilateral partnership supplying vaccines to LMICs). Ethically, the task ahead is fixing a problem of human making. A second argument, based on corporate social responsibility, stresses expectations for and benefits of socially responsible behaviour by for-profit companies. Increasingly, companies appreciate the potential impact that socially responsible behaviour has on competitive advantage, reputation, retention of workers and customers, employee morale and relationships with stakeholders.23 IP protections shield pharmaceutical companies from competition, enabling them to monopolise markets and generate above-normal profits. During a pandemic, social responsibility requires temporarily limiting profits and requiring companies to give back, rather than allowing above-normal profits to accrue unchecked. Even Locke, who conceived of our modern notion of property rights, held that fundamental rights like property could be justly overridden under certain conditions, namely, when the goods are perishable and would go to waste or when their extraction may intrude on the common good, in which case they extend only to what leaves enough behind for others.24 Building on this analysis, we submit that displays of social responsibility fall along a continuum. During the COVID-19 pandemic, a high degree of responsibility would be shown by temporarily sharing patents for products aimed at preventing, containing, or treating COVID-19, which is India and South Africa’s proposal; moderate responsibility would be demonstrated by temporarily sharing licenses to manufacture COVID-19 vaccines, as the WTO Director General proposes; and minimal responsibility would be shown by sending vaccines directly to nations in response to pleas for help, which Pfizer did when it pledged up to 40 million doses of its vaccine to COVAX (which represents under 2% of the 2.5 billion doses Pfizer will produce in 2021).25

#### 2] IP laws prioritize uniformity and predictability as a method of homogenizing knowledge and refusing experimentation.

Wu 14 [Tim Wu (Julius Silver Professor of Law, Science and Technology at Columbia University). “Intellectual Property Experimentalism By Way of Competition Law”. Columbia Law School. 2014. Accessed 8/16/21. <https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=2843&context=faculty_scholarship> //Xu]

The goals of uniformity and predictability has had its clearest implications at the international level. Unlike competition law, which varies significantly between OECD nations, over the last several decades all of the IP laws have become subject to a much stronger and geographically broader web of harmonizing international agreements, on multinational, regional and bilateral levels. The general aim of these treaties is to homogenize the world’s IP regimes, reducing or eliminating geographical variation. All of the major laws are the subject of longstanding global treaties specifying minimum protections (The Berne and Paris conventions), which were fortified in 1994 by the addition of an intellectual property agreement to the World Trade Organization, and further strengthened by numerous bilateral treaties since then. And of course the World Trade Organization, unlike the informal organizations common to competition law, has the power to punish deviations from the intellectual property treaties with serious trade sanctions. The pattern can also be observed at the national level. Both in Europe and the United States the last few decades have witnessed many important measures taken to create uniformity. In the United States, a single appeals court, the Federal Circuit, has heard the nation’s appeals in patent cases since 1982 in an effort to bring greater uniformity to the patent law. Though proposals for constructing a uniform patent court akin to the Federal Circuit in the European Union have been unsuccessful so far,26 the European Patent Convention, founded in 1973, provides a common application for the prosecution of patents in each of the member states.27 In short, stronger protection of uniform rights has been the clear trajectory of the intellectual property laws over the last few decades. That tendency is sharply at odds with the predispositions of the competition laws. The dichotomy I am suggesting here is, of course, not absolute. In certain areas of the competition law, one can sense the influence of a vested rights theory, in, for example, the resistance to breakups of dominant terms, even if the economic case for doing so might be quite strong. And there are areas in IP law, like the American fair use doctrine (a judicial and scholarly favorite), which have, in fact, served as important outlets for judicial tinkering in the face of changing conditions. For example the famous Sony decision, blessing the VCR, broke with prevalent copyright doctrine, arguably as a reaction to perceived technological necessity.28 Similarly, following a decade of bad press, Congress, the courts, and the American Patent Office have begun to make adjustments with American patent law. An example is the new post-grant review process, which includes a particular provision targeted at business method patents. Nonetheless it would be hard to describe the intellectual culture of either the intellectual property laws as truly committed to experimental improvement of the law. It would be even harder to describe competition law as devoted to the protection of fundamental rights. We are left with a divergence in intellectual cultures with broad implications for just about every advanced economy in the world. IV. USING ANTITRUST FOR PATENT EXPERIMENTALISM AT THE UNITED STATES SUPREME COURT I believe there is a need for a more experimentalist approach to the intellectual property laws, and particularly to the patent laws. The law, I believe, needs better mechanisms not simply to celebrate its successes, but to correct its errors, both specific and general. One way this might be achieved is to act within the structure and institutions of the laws themselves; as just discussed, this is a project underway in certain respects. But the other path is to rely on the competition laws as a kind of oversight and adjustment mechanism for the intellectual property laws.

### 1AC – Underview

#### 1] Aff gets 1AR theory since the neg can be infinitely abusive and I can’t check back. It’s drop the debater since the 1ar is too short to win both theory and substance. No 2NR RVI, paradigm issues, or theory since they’d dump on it for 6 minutes and my 3-minute 2AR is spread too thin. Competing interps since reasonability is arbitrary and bites judge intervention.

#### 2] Interpretation: The negative must concede the affirmative framework

#### Violation: It’s preemptive

#### Prefer-

#### A] Time skew- Winning the negative framework moots 6 minutes of 1AC offense and forces a 1AR restart against a 7 min 1NC – that outweighs on quantifiability and reversibility – I can’t get back time lost and it’s the only way to measure abuse.

#### B] Topic Ed- Every debate would just be a framework debate which crowds out our ability to have core debates about the topic – that outweighs- A] Time Frame- We only have 2 months to debate the topic B] Inclusion- Phil and K literature is incredibly dense and requires a vast amount of prior knowledge and experience which excludes novices while topic literature is less esoteric C] Constitutivism- The only thing intrinsic to debate is the topic so it should be prioritized D] Portability- topics are carefully chosen to have modern relevance so only debate about them can generate portable skills.

#### C] Prep skew- We can’t predict every single negative framework before round but they know the aff coming into round which makes pre-tournament prep impossible. Especially true since there are millions of K’s and NC’s that could negate. Prep skew outweighs A] Sequencing- It’s a perquisite engaging in-round since you need prep to debate B] Engagement- It ruins the quality and depth of discussions that make debate rounds educational.

#### D] Drop the debater to deter future abuse

#### E] No RVIs – 7 mins of afc answers kills substance ed and I only get 4 mins

#### F] Competing interps – Reasonability is arbitrary

#### 3] No 2NR “I meet” arguments

#### A] Skews theory ground because they’re each a NIB for me to winning theory which kills my ability to check abuse.

#### B] Skews time, they can make three minutes of blippy I meets that I can’t cover because the 2AR is too short.

#### 4] Check all neg interps and K/DA links in CX – 1) avoids infinite regress due to links and interps 2) otherwise reevlaute under the neg’s K 3) norms – you’d do the same with TFW

#### 5] No neg analytics - I don’t have time to cover 100 blippy arguments in the NC since you can read 7 min of analytics and extend any of them to win.

#### 6] No neg arguments – skews me to answer those. Answering this triggers a contradiction since it relies on an analytic argument and those affirm since I spoke first and they were your fault for creating.

#### 7] All K Links must quote explicit lines in the aff A] infinite amount of things the aff can implicitly justify which means the K becomes for for strat than change B] pigeon-holes you into a mere assumption – this is the root cause of oppressive mindsets since those labeled as “different” are assumed to deviate from “normal”

### 1AC – Advantage

#### Plan –The member nations of the World Trade Organization ought to reduce secondary patent protections for medicines

Implementation: a one-and-done approach for patent protection.

What type of intellectual property protections: secondary patent protections

To what degree: Only secondary groups can patent new developments on existing drugs

#### The Advantage is Innovation -

#### We are in an innovation crisis – new drugs are not being developed in favor of re-purposing old drugs to infinitely extend patent expiration.

Feldman 1 Robin Feldman 2-11-2019 "‘One-and-done’ for new drugs could cut patent thickets and boost generic competition" <https://www.statnews.com/2019/02/11/drug-patent-protection-one-done/> (Arthur J. Goldberg Distinguished Professor of Law, Albert Abramson ’54 Distinguished Professor of Law Chair, and Director of the Center for Innovation)//SidK + Elmer

Drug companies **have brought great innovations** to market. Society rewards innovation with patents, or with non-patent exclusivities that can be obtained for activities such as testing drugs in children, undertaking new clinical studies, or developing orphan drugs. The rights provided by patents or non-patent exclusivities provide a defined time period of protection so companies can recoup their investments by charging monopoly prices. When patents end, lower-priced competitors should be able to jump into the market and drive down the price. **But that’s not happening**. Instead, drug companies build massive patent walls around their products, extending the protection **over and over again**. Some modern drugs have an avalanche of U.S. patents, with expiration dates **staggered across time**. For example, the rheumatoid arthritis drug Humira is **protected by more than 100 patents**. Walls like that **are insurmountable**. Rather than rewarding innovation, our patent system is now largely repurposing drugs.

#### The only major study confirms our Internal Link – Evergreening decimates competition by resulting in functional monopolies

Arnold Ventures 20 9-24-2020 "'Evergreening' Stunts Competition, Costs Consumers and Taxpayers" <https://www.arnoldventures.org/stories/evergreening-stunts-competition-costs-consumers-and-taxpayers/> (Arnold Ventures is focused on evidence-based giving in a wide range of categories including: criminal justice, education, health care, and public finance)//Elmer

In 2011, Elsa Dixler was diagnosed with multiple myeloma. That August, she was prescribed Revlimid, a drug that had come on the market six years earlier. By January 2012, she went into full remission, where she has remained since. So long as Revlimid retains its effectiveness, she will take it for the rest of her life. “I was able to go back to work, see my daughter receive her Ph.D, and have a pretty normal life,” said Dixler, a Brooklyn resident who is now 74. “So, on the one hand, I feel enormously grateful.” But Dixler’s normal life has come at a steep financial cost to her family and to taxpayers. Revlimid typically costs nearly $800 per capsule, and Dixler takes one capsule per day for 21 days, then seven days off, and then resumes her daily dose, requiring 273 capsules a year. Since retiring from The New York Times at the end of 2017, she has been on Medicare. Dixler entered the Part D coverage gap (known as the donut hole) “within minutes,” she said. She estimates that adding her deductible, her copayment of $12,000, and what her Part D insurance provider pays totals approximately $197,500 a year. Revlimid should have **been subject to competition** from generic drug makers starting in 2009, bringing down its cost by many orders of magnitude. But by obtaining **27 additional patents**, eight orphan drug exclusivities and 91 total additional protections from the U.S. Food and Drug Administration (FDA) since Revlimid’s introduction in 2005, its manufacturer, Celgene, has extended the drug’s **monopoly** **period** **by 18 years** — through March 8, 2028. “I cannot fathom the immorality of a business that relies on **squeezing people with cancer**,” Dixler said, noting her astonishment that Revlimid has obtained orphan drug protections when it treats a disease that is not rare and does not serve a very limited population. She also observed that Revlimid’s underlying drug is thalidomide, which has been around for decades. “They didn’t invent a new drug, rather, they found a new use for it,” she said. “The cost of Revlimid has imposed constraints on our retirement,” Dixler said, “but when I hear other people’s stories, I feel very lucky. A lot of people have been devastated financially.” Revlimid is a case study in a process known as “evergreening” — artificially sustaining a monopoly for years and even decades by manipulating intellectual property laws and regulations. Evergreening is most commonly used with blockbuster drugs generating the highest prices and profits. **Of the roughly 100 best-selling drugs, more than 70 percent have extended their protection** from competition at least once. More than half have extended the protection cliff multiple times. The true scope and cost of evergreening has been brought into sharper focus by a groundbreaking, publicly available, comprehensive database released Thursday by the [Center for Innovation](https://www.uchastings.edu/academics/centers/center-for-innovation/) at the University of California Hastings College of Law and supported by Arnold Ventures.

#### Only innovation now solves AMR super-bugs -- timeframe’s key.

Sobti 19 [Dr. Navjot Kaur Sobti is an internal medicine resident physician at Dartmouth-Hitchcock-Medical Center/Dartmouth School of Medicine and a member of the ABC News Medical Unit. May 1, 2019. “Amid superbug crisis, scientists urge innovation”. <https://abcnews.go.com/Health/amidst-superbug-crisis-scientists-urge-innovation/story?id=62763415>] Dhruv

[The United Nations](https://abcnews.go.com/Politics/amal-clooney-angelina-jolie-speak-us-weighed-vetoing/story?id=62574726) has called antimicrobial resistance a “global crisis.” With the [rise in superbugs](https://abcnews.go.com/Health/superbug-fungus-global-health-threat-600-us-infected/story?id=62297532) across the globe, common infections are becoming harder to treat, and lifesaving procedures riskier to perform. Drug-resistant infections result in about 700,000 deaths per year, with at least 230,000 of those deaths due to multidrug resistant tuberculosis, [according to a groundbreaking report from the World Health Organization (WHO).](https://www.who.int/antimicrobial-resistance/interagency-coordination-group/IACG_final_report_EN.pdf?ua=1) Given that antibiotic resistance is present in every country, antimicrobial resistance (AMR) now represents a global health crisis, according to the UN, which has urged immediate, coordinated and global action to prevent a potentially devastating health and financial crisis. With the rising rates of AMR -- including antivirals, antibiotics, and antifungals -- estimates from the WHO show that AMR may cause 10 million deaths every year by 2050, send 24 million people into extreme poverty by 2030, and lead to a financial crisis as severe as the on the U.S. experienced in 2008. Antimicrobial resistance develops when germs like bacteria and fungi are able to “defeat the drugs designed to kill them,” according to the Centers for Disease Control and Prevention. Through a biologic “survival of the fittest,” germs that are not killed by antimicrobials and continue to grow. WHO explains that “poor infection control, inadequate sanitary conditions and inappropriate food handling encourage the spread” of AMR, which can lead to “superbugs.” Those superbugs require powerful and oftentimes more expensive antimicrobials to treat. Examples of superbugs are far and wide, and can range from drug-resistant bacteria like Pseudomonas aeruginosa and Staphylococcus aureus to fungi like Candida. These bugs can cause illnesses that range from pneumonia to urinary tract and sexually transmitted infections. According to the WHO, AMR has caused complications for nearly 500,000 people with tuberculosis, and a number of people with HIV and malaria. The people at the [highest risk for AMR](https://www.who.int/news-room/detail/27-02-2017-who-publishes-list-of-bacteria-for-which-new-antibiotics-are-urgently-needed) are those with chronic diseases, people living in nursing homes, hospitalized in the ICU or undergoing life-saving treatments such as organ transplantation and cancer therapy. These people often develop infections, which can become antimicrobial-resistant, rendering them difficult, if not impossible, to treat. [(MORE: Melissa Rivers talks about her father's suicide with Dr. Jennifer Ashton)](https://abcnews.go.com/Health/melissa-rivers-talks-fathers-suicide-dr-jennifer-ashton/story?id=62733179&cid=clicksource_26_null_headlines_hed) The CDC notes that “antibiotic resistance has the potential to affect people at any stage of life,” including the “healthcare, veterinary, and agriculture industries, making it one of the world’s most urgent public health problems." AMR can cause prolonged hospital stays, billions of dollars in healthcare costs, disability, and potentially, death. “The most important thing is to understand and embrace the interconnectedness of all of this,” said Dr. Robert Redfield, director of the CDC, in a recent interview with ABC News’ Dr. Jennifer Ashton. It’s not just our countries that are connected.” Research has shown that superbugs like Candida auris “came from multiple places, at the same time. It wasn’t just one organism that [evolved]” in a single location, Redfield added. Given longstanding concerns about antimicrobial misuse leading to AMR, physicians have embraced a medical approach called antibiotic stewardship. This encourages physicians to carefully evaluate which antibiotic is most appropriate for their patient, and discontinue it once it is no longer medically needed. WHO has also highlighted that the inappropriate use of antimicrobials in agriculture -- such as on farms and in animals -- may be an underappreciated cause of AMR. Noting these trends, the WHO has urged for “coordinated action...to minimize the emergence and spread of antimicrobial resistance.” It urges all countries to make national action plans, with a focus on the development of new antimicrobial medications, vaccines, and careful antimicrobial use. Redfield emphasized the importance of vaccination during the global superbug crisis, stating that “the only way we have to eliminate an infection is vaccination.” He added that investing in innovation is key to solving the crisis. While WHO continues to advocate for superbug awareness, they warn that AMR has reversed “a century of progress in health.” The WHO added that “the challenges of antimicrobial resistance” are “not insurmountable,” and that coordinated action will “help to save millions of lives, preserve antimicrobials for generations to come and secure the future from drug-resistant diseases.”

#### Extinction - generic defense doesn’t apply.

Srivatsa 17 Kadiyali Srivatsa 1-12-2017 “Superbug Pandemics and How to Prevent Them” <https://www.the-american-interest.com/2017/01/12/superbug-pandemics-and-how-to-prevent-them/> (doctor, inventor, and publisher. He worked in acute and intensive pediatric care in British hospitals)//Elmer

It is by now no secret that the human species is locked in a race of its own making with “superbugs.” Indeed, if popular science fiction is a measure of awareness, the theme has pervaded English-language literature from Michael Crichton’s 1969 Andromeda Strain all the way to Emily St. John Mandel’s 2014 Station Eleven and beyond. By a combination of massive inadvertence and what can only be called stupidity, we must now invent new and effective antibiotics faster than deadly bacteria evolve—and regrettably, they are rapidly doing so with our help. I do not exclude the possibility that bad actors might deliberately engineer deadly superbugs.1 But even if that does not happen, humanity faces an existential threat largely of its own making in the absence of malign intentions. As threats go, this one is entirely predictable. The concept of a “black swan,” Nassim Nicholas Taleb’s term for low-probability but high-impact events, has become widely known in recent years. Taleb did not invent the concept; he only gave it a catchy name to help mainly business executives who know little of statistics or probability. Many have embraced the “black swan” label the way children embrace holiday gifts, which are often bobbles of little value, except to them. But the threat of inadvertent pandemics is not a “black swan” because its probability is not low. If one likes catchy labels, it better fits the term “gray rhino,” which, explains Michele Wucker, is a high-probability, high-impact event that people manage to ignore anyway for a raft of social-psychological reasons.2 A pandemic is a quintessential gray rhino, for it is no longer a matter of if but of when it will challenge us—and of how prepared we are to deal with it when it happens. We have certainly been warned. The curse we have created was understood as a possibility from the very outset, when seventy years ago Sir Alexander Fleming, the discoverer of penicillin, predicted antibiotic resistance. When interviewed for a 2015 article, “The Most Predictable Disaster in the History of the Human Race, ” Bill Gates pointed out that one of the costliest disasters of the 20th century, worse even than World War I, was the Spanish Flu pandemic of 1918-19. As the author of the article, Ezra Klein, put it: “No one can say we weren’t warned. And warned. And warned. A pandemic disease is the most predictable catastrophe in the history of the human race, if only because it has happened to the human race so many, many times before.”3 Even with effective new medicines, if we can devise them, we must contain outbreaks of bacterial disease fast, lest they get out of control. In other words, we have a social-organizational challenge before us as well as a strictly medical one. That means getting sufficient amounts of medicine into the right hands and in the right places, but it also means educating people and enabling them to communicate with each other to prevent any outbreak from spreading widely. Responsible governments and cooperative organizations have options in that regard, but even individuals can contribute something. To that end, as a medical doctor I have created a computer app that promises to be useful in that regard—of which more in a moment. But first let us review the situation, for while it has become well known to many people, there is a general resistance to acknowledging the severity and imminence of the danger. What Are the Problems? Bacteria are among the oldest living things on the planet. They are masters of survival and can be found everywhere. Billions of them live on and in every one of us, many of them helping our bodies to run smoothly and stay healthy. Most bacteria that are not helpful to us are at least harmless, but some are not. They invade our cells, spread quickly, and cause havoc that we refer to generically as disease. Millions of people used to die every year as a result of bacterial infections, until we developed antibiotics. These wonder drugs revolutionized medicine, but one can have too much of a good thing. Doctors have used antibiotics recklessly, prescribing them for just about everything, and in the process helped to create strains of bacteria that are resistant to the medicines we have. We even give antibiotics to cattle that are not sick and use them to fatten chickens. Companies large and small still mindlessly market antimicrobial products for hands and home, claiming that they kill bacteria and viruses. They do more harm than good because the low concentrations of antimicrobials that these products contain tend to kill friendly bacteria (not viruses at all), and so clear the way for the mass multiplication of surviving unfriendly bacteria. Perhaps even worse, hospitals have deployed antimicrobial products on an industrial scale for a long time now, the result being a sharp rise in iatrogenic bacterial illnesses. Overuse of antibiotics and commercial products containing them has helped superbugs to evolve. We now increasingly face microorganisms that cannot be killed by antibiotics, antifungals, antivirals, or any other chemical weapon we throw at them. Pandemics are the major risk we run as a result, but it is not the only one. Overuse of antibiotics by doctors, homemakers, and hospital managers could mean that, in the not-too-distant future, something as simple as a minor cut could again become life-threatening if it becomes infected.

#### Pharma Innovation solves Bioterror.

Gillis 1 Justin Gillis 11-8-2001 “Scientists Race for Vaccines” [www.vaccinationnews.org/DailyNews/November2001/ScisRaceForVax.htm](http://www.vaccinationnews.org/DailyNews/November2001/ScisRaceForVax.htm) (Writer at Washington Post)//Elmer

U.S. scientists, spurred into action by the events of Sept. 11, have begun a concerted assault on bioterrorism, working to produce an array of new medicines that include treatments for smallpox, a safer smallpox vaccine and a painless anthrax vaccine. At least one major drug company, Pharmacia Corp. of Peapack, N.J., has offered to let government scientists roam through the confidential libraries of millions of compounds it has synthesized to look for drugs against bioterror agents. Other companies have signaled that they will do the same if asked. These are unprecedented offers, since a drug company's chemical library, painstakingly assembled over decades, is one of its primary assets, to which federal scientists usually have no access. "A lot of people would say we won World War II with the help of a mighty industrial base," said Michael Friedman, a onetime administrator at the Food and Drug Administration who was appointed days ago to coordinate the pharmaceutical industry's efforts. "**In** this new **war against bioterrorism**, the **mighty** industrial **power is the pharmaceutical industry**." Researchers say a generation of young scientists never **called upon** before to defend the nation is **working** overtime **in a push for rapid progress**. At laboratories of the National Institutes of Health, at universities and research institutes across the land, people are scrambling. But the campaign, for all its urgency, **faces hurdles** **both scientific and logistical**. The kind of **research** now underway **would** **normally** **take** **at least a decade** before products appeared on pharmacy shelves. Scientists are talking about **getting** at least some **new products out the door within two years**, a daunting schedule in medical research. If that happens, it **will** **be with considerable assistance from the nation's drug companies.** They are the **only organizations** in the country **with** the **scale** **to move rapidly to produce** pills and vials of **medicine** that might be needed by the billions.

#### Bioterrorism causes Extinction – overcomes any conventional defense.

Walsh 19, Bryan. End Times: A Brief Guide to the End of the World. Hachette Books, 2019. (Future Correspondent for Axios, Editor of the Science and Technology Publication OneZero, Former Senior and International Editor at Time Magazine, BA from Princeton University)//Elmer

I’ve lived through disease outbreaks, and in the previous chapter I showed just how unprepared we are to face a widespread pandemic of flu or another new pathogen like SARS. But a deliberate outbreak caused by an engineered pathogen would be far worse. We would face the same agonizing decisions that must be made during a natural pandemic: whether to ban travel from affected regions, how to keep overburdened hospitals working as the rolls of the sick grew, how to accelerate the development and distribution of vaccines and drugs. To that dire list add the terror that would spread once it became clear that the death and disease in our midst was not the random work of nature, but a deliberate act of malice. We’re scared of disease outbreaks and we’re scared of terrorism—put them together and you have a formula for chaos. As deadly and as disruptive as a conventional bioterror incident would be, an attack that employed existing pathogens could only spread so far, limited by the same laws of evolution that circumscribe natural disease outbreaks. But a virus engineered in a lab to break those laws could spread faster and kill quicker than anything that would emerge out of nature. It can be designed to evade medical countermeasures, frustrating doctors’ attempts to diagnose cases and treat patients. If health officials manage to stamp out the outbreak, it could be reintroduced into the public again and again. It could, with the right mix of genetic traits, even wipe us off the planet, making engineered viruses a genuine existential threat. And such an attack may not even be that difficult to carry out. Thanks to advances in biotechnology that have rapidly reduced the skill level and funding needed to perform gene editing and engineering, what might have once required the work of an army of virologists employed by a nation-state could soon be done by a handful of talented and trained individuals. Or maybe just one. When Melinda Gates was asked at the South by Southwest conference in 2018 to identify what she saw as the biggest threat facing the world over the next decade, she didn’t hesitate: “A bioterrorism event. Definitely.”2 She’s far from alone. In 2016, President Obama’s director of national intelligence James Clapper identified CRISPR as a “weapon of mass destruction,” a category usually reserved for known nightmares like nuclear bombs and chemical weapons. A 2018 report from the National Academies of Sciences concluded that biotechnology had rewritten what was possible in creating new weapons, while also increasing the range of people capable of carrying out such attacks.3 That’s a fatal combination, one that plausibly threatens the future of humanity like nothing else. “The existential threat that would be most available for someone, if they felt like doing something, would be a bioweapon,” said Eric Klien, founder of the Lifeboat Foundation, a nonprofit dedicated to helping humanity survive existential risks. “It would not be hard for a small group of people, maybe even just two or three people, to kill a hundred million people using a bioweapon. There are probably a million people currently on the planet who would have the technical knowledge to pull this off. It’s actually surprising that it hasn’t happened yet.”