### NC – Innovation

#### Pharmaceutical innovation is accelerating now – new medicines are substantially better than existing treatments.

Wills, MBA, and Lipkus, PhD, 20 – Todd J. Wills [Managing Director @ Chemical Abstracts Service, MBA from THE Ohio State University] and Alan H. Lipkus [Senior Data Analyst @ Chemical Abstracts Service, PhD Physical Chemistry from the University of Rochester], “Structural Approach to Assessing the Innovativeness of New Drugs Finds Accelerating Rate of Innovation,” ACS Medicinal Chemistry Letters, Vol. 11, 2020, <https://pubs.acs.org/doi/pdf/10.1021/acsmedchemlett.0c00319> C.VC

Despite recent concerns over an innovation crisis, this analysis shows pharmaceutical innovation has actually increased over the last several decades based on the structural novelty of approved NMEs. The higher proportion of Pioneers over the most recent decade is a sign that innovation within the industry is accelerating rather than slowing. It is also an encouraging sign for the state of innovation in drug discovery that these Pioneers are significantly more likely to be the source of promising new therapies that are expected to provide substantial clinical advantages over existing treatments. Drug hunters are discovering Pioneers in newer and less explored regions of chemical space as they are increasingly found on scaffolds first reported in the CAS REGISTRY five or less years prior to their IND year or on scaffolds populated with 50 or less other compounds at the time of IND.

As scale becomes less of a strategic advantage, Big Pharma’s share of Pioneers has decreased even though the number of Big Pharma originated Pioneers has increased. This has created a structural innovation gap between Big Pharma and the Rest of Ecosystem which has widened over the last two decades as the Rest of Ecosystem is now responsible for originating almost 3 out of every 4 Pioneers. Pioneers originated by the Rest of Ecosystem are increasingly on new scaffolds, while a majority of Big Pharma originated Pioneers have historically been on new scaffolds.

The work presented here was intended as a study of drug innovation at a macro level. As a result, it included substances of various sizes with different degrees of complexity belonging to a range of functional and drug classes. Even though it was outside the scope of the present work to study specific subsets, such focused studies could yield additional insights into how innovation at a more micro level has changed over time. Other interesting subsets of our data set are the shapes and scaffolds of the Settlers and Colonists. Many of these shapes and scaffolds are privileged in the sense that they are seemingly capable of serving as ligands for a diverse array of target proteins. A separate study of the Settlers and Colonists as well as their side chains could provide insights into possible target-specific innovation trends.

As it often takes more than 10 years after initial discovery for an experimental drug to gain FDA approval, any measure of drug innovation that relies on the time of approval incorporates a significant time lag between initial discovery and ultimate approval. However, characterizing drug innovation based on structural novelty provides a means to assess the forward-looking innovation potential of an experimental drug at the time of initial discovery by comparing its framework information (at the scaffold and shape level) with prior FDA-approved drugs. Therefore, a separate study of drug candidates with publically disclosed structures currently in clinical development could provide additional insights into innovation trends at an FDA regulatory review level and serve as a leading indicator of innovation trends at an FDA approval level.

Given the tremendous opportunity represented by the vast amount of chemical space yet to be explored, drug-hunters of all types will continue pushing the boundaries to find promising new therapies in previously unexplored areas of chemical space. The race to discover these new drugs will be fueled by further advancements in screening approaches and in-silico methods (including innovations related to machine learning algorithms and molecular representations). However, comprehensive data on known shapes and scaffolds can fast track the identification of meaningful open areas of chemical space (shapes or scaffolds that are potentially important but have never been used as the basis for a molecule) to further explore.

#### The biopharmaceutical industry is uniquely reliant on IP protections – undermining them would kill innovation by making an already expensive process completely unfeasible.

Kristina M. Lybecker, PhD, 17 [PhD Economics, Associate Professor of Economics @ Colorado College], “Intellectual Property Rights Protection and the Biopharmaceutical Industry: How Canada Measures Up,” Fraser Institute, January 2017, <https://www.fraserinstitute.org/sites/default/files/intellectual-property-rights-protection-and-the%20biopharmaceutical-industry.pdf> C.VC

The unique structure of the innovative biopharmaceutical industry necessitates a variety of intellectual property protection mechanisms. In particular, the industry is characterized by a research and development (R&D) process that is lengthy, expensive, uncertain, and risky. According to DiMasi and colleagues, the estimated cost of developing a new medicine is US$2.6 billion (DiMasi, Grabowski, and Hansen, 2016).2 In addition, the time required to develop a new drug is also significant, averaging 10 to 15 years without any guarantee of success (PhRMA, n.d.). While these figures are highly controversial, biopharmaceutical innovation is unquestionably an expensive and lengthy undertaking.3 For the biopharmaceutical industry, innovation and its protection are essential and the source of both profits and growth. As such, patent protection is disproportionally more important for ensuring that the innovator appropriates the returns to R&D for the biopharmaceutical industry than virtually any other. Extending the findings of the 1987 “Yale Survey” (Levin, Klevorick, Nelson, and Winter, 1987), the “Carnegie Mellon Survey” established that while patents are again considered “unambiguously the least effective appropriability mechanisms,” the drug industry and other scholars regard them as strictly more effective than alternative mechanisms (Cohen, Nelson, and Walsh, 1996). The industry’s disproportionate reliance on patents and other forms of intellectual property protection is confirmed in numerous other studies.4

In essence, IPR protections provide innovative biopharmaceutical firms with an assurance of some return on their investment, thus creating incentives for the development of new technologies that could otherwise be easily replicated and sold by competitors. Due to the tremendous fixed costs required to develop new treatments and cures, a significant potential exists for free riding by follower firms, a market failure that would prevent investment in innovation were it not for the patents and other forms of intellectual property protections that provide a limited period of market exclusivity or other such incentives. Fundamentally, patents amount to an efficiency tradeoff. Society provides innovators with a limited period of market exclusivity to encourage innovation in exchange for public access to this knowledge. In exchange for the temporary static loss from market exclusivity, society gains complete knowledge of the innovation through disclosure, a permanent dynamic gain. Through this tradeoff, the existing patent system corrects the market failure that would stymie innovation. In its Apotex Inc. v. Wellcome Foundation Ltd. finding, Justice Binnie wrote for the Supreme Court of Canada, “A patent, as has been said many times, is not intended as an accolade or civic award for ingenuity. It is a method by which inventive solutions to practical problems are coaxed into the public domain by the promise of a limited monopoly for a limited time. Disclosure is the quid pro quo for valuable proprietary rights to exclusivity which are entirely the statutory creature of the Patent Act” (para. 37)… These investments of time and financial resources should be recognized and the effective patent life should be sufficient to recoup these investments. Continued investment and innovation are contingent upon strong, effective intellectual property protection and the ability of innovative firms to recoup their investments. Patents and other forms of intellectual property protection are disproportionally important to the research-based biopharmaceutical industry. Consequently, the legal architecture necessary to foster a robust innovation-based industry is multifaceted and is a powerful force shaping the biopharmaceutical industry, its profitability, productivity, and innovative future.

#### Pharmaceutical innovation is key to protecting against future pandemics, bioterrorism, and antibiotic resistance.

Marjanovic and Fejiao ‘20 Marjanovic, Sonja, and Carolina Feijao. Sonja Marjanovic, Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitive biology, Imperial College London; B.Sc. in biology, University of Lisbon. "Pharmaceutical Innovation for Infectious Disease Management: From Troubleshooting to Sustainable Models of Engagement." (2020). [Quality Control]

As key actors in the healthcare innovation landscape, pharmaceutical and life sci-ences companies have been called on to develop medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also infectious diseases that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a bioterrorism con-text.1 The general threat to public health that is posed by antimicrobial resistance is also well-recognised as an area in need of pharmaceutical innovation. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and compe-tition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an indispensable partner in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceu-tical innovation in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is essential for socially responsible companies in the sec-tor.2 It is therefore unsurprising that we are seeing indus-try-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently contributing in a variety of ways. Examples include pharmaceutical companies donating existing com-pounds to assess their utility in the fight against COVID-19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating tri-als for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accel-erate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The primary purpose of such innovation is to benefit patients and wider population health. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be rela-tively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pres-sure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing com-bination product that is being tested for therapeutic poten-tial against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider how pharmaceutical innovation for responding to emerging infectious diseases can best be enabled beyond the current crisis. Many public health threats (including those associated with other infectious diseases, bioterror-ism agents and antimicrobial resistance) are urgently in need of pharmaceutical innovation, even if their impacts are not as visible to society as COVID-19 is in the imme-diate term. The pharmaceutical industry has responded to previous public health emergencies associated with infec-tious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contribu-tions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still low.12 There are important policy questions as to whether – and how – industry could engage with such public health threats to an even greater extent under improved innova-tion conditions.

### Util FW

#### Use epistemic modesty- most consistent with game theory- that means util

MacAskill 18 – (Will MacAskill, Associate Professor in Philosophy at Oxford University, author of Doing Good Better, and one of the co-founders of the effective altruism community., interviewed by Robert Wilbin, “Our descendants will probably see us as moral monsters. What should we do about that?”, 80000 Hours, 1-19-18, Available Online at <https://80000hours.org/podcast/episodes/will-macaskill-moral-philosophy/#top>, accessed 8-21-18, HKR-AM)

Will MacAskill: Terrific. Introducing the core idea is that we make decisions about under empirical uncertainty all the time. There’s been decades of research on how you ought to make those decisions. The standard view is to use expected utility reasoning or expected value reasoning, which is where you look at the probability of different outcomes and the value it would obtain. Given those outcomes, all dependent on which action you choose, then you take the sum product and you choose the action with the highest expected value. That sounds all kind of abstract and mathematical, but the core idea is very simple where if I give you a beer you think 99% likely that beer is going to be delicious, give you a little bit happiness. There’s a 1 in 100 chance that it will kill you because I’ve poisoned it. Then it would seem like it’s irrational for you to drink the beer. Even though there’s a 99% chance of a slightly good outcome, there’s a 1 in 100 chance of an extremely bad outcome. In fact, that outcome’s 100 times worse than the pleasure of the beer is good.

Robert Wiblin: Probably more than 100 times. At least.

Will MacAskill: At least, yeah. That’s all you need. In which case the action with greater expected value is to not drink the beer. We think about this under empirical uncertainty all the time. We look at both the probability of different outcomes and how good or bad those outcomes would be. Then, when you look at people’s moral reasoning, it seems like very often people reason in a very different way. I call this the football fan model of decision making given model uncertainty. People say, “I’m a libertarian, or I’m a utilitarian, or I’m a contractualist.” At least, moral philosophers speak this way. Then they just say, “Well, given that, this is what I think I ought to do.” They’re no longer thinking about uncertainty about what matters morally. Instead they’re just picking their favorite view and then acting on that assumption. That seems irrational given all we’ve learned about how to make decisions under empirical uncertainty. The question I address is: supposing we really do want to take moral uncertainty under account, how should we do that?

In particular, it seems like given the obvious analogy with decision making under empirical uncertainty, we should do something like expected value reasoning where we look at a probability that we assign to all sorts of different moral views, and then we look at how good or bad would this action be under all of those different moral views. Then, we take the best compromise among them, which seem to be given by the expected value under those different moral views.

#### Impartiality comes first- without it, moral theories would lose their prescriptive force because individuals would not follow them because they do not treat them equally.

#### Independently, EM is best for clash- prevents arbitrarily inflating the value of preclusive frameworks at the expense of topic edu.

#### Thus, the standard is maximizing expected wellbeing

#### 1] Only it can explain degrees of wrongness- it is worse to break a promise to not save a dying friend’s life versus breaking a promise to meet for lunch- only consequentialism can explain why the first is worse

#### 3] Actor spec-

#### B] Gov’ts have to aggregate since all collective actions require trade-offs that benefit some and worsen others- side-constraints freeze action and render ethics inoperable- takes-out and turns calc indicts- consequentialism is hard but not impossible, it’s empirically false since we calculate all the time, and the alt is no action which is worse

#### 3] Extinction o/ws under any framework- moral uncertainty and future gens

Pummer 15 — (Theron Pummer, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford, “Moral Agreement on Saving the World“, Practical Ethics University of Oxford, 5-18-2015, Available Online at http://blog.practicalethics.ox.ac.uk/2015/05/moral-agreement-on-saving-the-world/, accessed 7-2-2018, HKR-AM) \*\*we do not endorse ableist language=

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; it is not the view that the latter don’t matter. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be undermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty. What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters, it is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)

#### 4] Util is a lexical pre-req to any other framework-

#### A] Threats to bodily security and life preclude other moral frameworks- moral actors can’t effectively act in non-ideal conditions which undermines their framework

#### B] Death ontologically destroys the subject and precludes the possibility of agency- rejection of life cannot be accepted because it is the basis of all other moral theories

#### Their fw

#### Apply reasonability to all of these arguments – dropping one is not enough to vote on it, if you cannot explain or give a real world example then you should not vote on it

#### A priori ethics doesn’t exclude util—the first principle of maximizing wellbeing is just as a priori as the categorical imperative—evaluation does require experience, but so does Kant—that an action fulfills a promise is just as empirical as whether it produces pleasure—also we solve reason 1st since it just proves our arguments have to be logical

#### Empirical uncertainty doesn’t matter in modern world, people can share experiences and learn about different views

#### Constitutive authority – meta ethics is not bindingness. Reasoning doesn’t give anyone authority since everyone can do it

#### Naturalistic fallacy - Conclusions come from analyzing data to reach a conclusion, which is how scientists reach their conclusions. One other conclusion is not needed to form one of your own

#### Reason is based on human experience and knowledge bc it is how we tell what is right and wrong. B- non universal norms aren’t going to only want to assume that things are ending

#### Ethical fws are not t interps they are different ways to frame the round. Preround prep is very important and those who lack can use the wiki – doesn’t limit

#### Cross apply the d point about reason. Not all agents are going to be equal – we are not egaul to gov – its not restricting govs should make desicions

#### Presumption and permissibility – statements have to be proven either true or false, I know your name due to facts and other ways like the wiki or tab or your email. B – things have to be proven permissible and there are things prohibiting the aff

#### consequences don’t fail – a. we can cap the amount of consequences and eventually they will be very low in probability. B – induction doesn’t fail - People use history to learn from their mistakes. We use past events all the time even if it isn’t 100% sure to happen we still have a good reason to assume it to happen, like doing your homework will give you credit. C – even if one step of the action is moral it doesn’t mean that overall it was moral have to look at whole picture. D – no act omission distinction – you can be moral, those infinite events will no always play a role into what you are doing now – like what is happening right now, different things are occurring yet none impact me

### NC

#### Kant negates:

#### 1. Non-contradiction: nobody would create without IP. Van Dyke 18

Raymond Van Dyke (Technology and Intellectual Property Attorney, Patent Practitioner, Van Dyke Intellectual Property Law), 7-17-2018, "The Categorical Imperative for Innovation and Patenting," IPWatchdog, [https://www.ipwatchdog.com/2018/07/17/categorical-imperative-innovation-patenting/id=99178/](about:blank)

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.

#### 2. Kant justifies a fundamental right to property. Merges 11

Robert Merges, (Wilson Sonsini Goodrich & Rosati Professor of Law and Technology, University of California, Berkeley, School of Law) “Justifying Intellectual Property,” Harvard University Press, 2011. https://www.hup.harvard.edu/catalog.php?isbn=9780674049482

Kant believed that any object onto which a person projects his or her will may come to be owned. Kant seemed to consider ownership as a primitive concept whose roots run very deep in human consciousness. This is evident from the language he uses. The origin of property, he says, is in a deep and abiding sense of “Mine and Yours.” “That is rightfully mine,” he writes, “if I am so bound to it that anyone who uses it without my consent would thereby injure me.”15

But what is the point of this? Why do people want to be bound to things? In essence, Kant says, to expand their range of freedom— their autonomy.16 People have a desire to carry out projects in the world. Sometimes, those projects require access to and control over external objects. The genesis of property is the desire of an individual to carry out personal projects in the world, for which various objects are necessary. For Kant, this desire must be given its broadest scope, to promote the widest range of human choice, and therefore human projects. Kant accordingly refuses to accept any binding legal rule that makes some objects strictly unownable, because the rationale for such a rule would conflict with the basic need for maximal freedom of action. Freedom to appropriate is so basic, so tied to matters of individual will and personal choice, that Kant finds it unthinkable to rule out large categories of things from the domain of the potentially ownable. As Kant scholar Paul Guyer says, for Kant, “The fundamental principle of morality dictates the protection of the external use of freedom or freedom of action, as a necessary expression of freedom of choice and thus as part of autonomy as a whole. . . .”17 This captures it in a nutshell: freedom of action, including the right to possess, as a necessary expression of freedom of choice, or autonomy.

#### 3. IP is property. Shultz 14

Mark Schultz (Chair in Intellectual Property Law and the Director of the Intellectual Property and Technology Law Program at the University of Akron School of Law and co-founder and a leader of the Center for Intellectual Property x Innovation Policy at George Mason University) “A free market perspective on intellectual property rights,” American Enterprise Institute, 2/23/2014. https://www.aei.org/technology-and-innovation/intellectual-property/free-market-perspective-intellectual-property-rights/

Point 1.Intellectual property secures the same values as physical property

As an institution, property secures rights in what we create through our work. In this regard, there’s no cause or need to distinguish intellectual property from any other forms of property. In all cases, a person employs his intellect and talents to impose his plan and will on his environment to bring something new into the world. This is the essence of productive labor, the fruits of which property protects.

Distinguishing between physical and intellectual labor, as some would, is misguided, because both are, at heart, the same activity. Whether it is a carpenter building a house, a farmer planting a field, an author writing a book, a director filming a movie, or an inventor developing a new drug, the activity is, ultimately, productive labor.

1. Squo disproves scientific advancements – we have made tons of new achievements that help people such as a covid vaccine which means patents are not preventing us
2. Don’t solve free market economies – if they are right about copyright being bad and preventing them – it means that they cant create a free market bc there will still be more barriers that the plan doesn’t remove

#### Removal doesn’t foster innovation – none of their cards ever mention innovation and it disincentives companies bc they have nothing to get out of it. Monopolies won’t exist to a point where they are uncontrollable – gov and other companies can check back on them.

#### It doesn’t solve – there are tons of barriers to access to vaccines, especially in developing countries. Even if it’s legal to make generics, lack of raw materials, expertise, and production facilities mean the plan is a drop in the bucket for responding to global covid

Herper et al 21 [Matthew Herper Senior Writer, Medicine, Editorial Director of Events at STAT. "Waiver of patent rights on Covid-19 vaccines, in near term, may be more symbolic than substantive." https://www.statnews.com/2021/05/06/waiver-of-patent-rights-on-covid-19-vaccines-in-near-term-may-be-more-symbolic-than-substantive/]

Prashant Yadav, a supply chain expert and senior fellow at the Center for Global Development, said the biggest barrier to increasing the global vaccine supply is a lack of raw materials and facilities that manufacture the billions of doses the world needs. Temporarily suspending some intellectual property, as the U.S. proposes to do, would have little effect on those problems, he said.

“My take is: By itself, it will not get us much benefit in increased manufacturing capacity,” Yadav said. “But as part of a larger package, it can.”

That larger package would include wealthy nations like the U.S. mounting an Operation Warp Speed-style effort to invest in manufacturing in low-income countries, he said, using their vast financial resources to actually produce vaccine doses rather than solely targeting patents.

Lawrence Gostin, director of the O’Neill Institute for National and Global Health Law at Georgetown Law, said the waiver is necessary but hardly sufficient. It will likely take months of international infighting before the proposal would take effect, he said, months during which would-be manufacturers would not have the right to start producing vaccines.

“We’re not talking about any immediate help for India or Latin America or other countries going through an enormous spread of the virus,” Gostin said. “While they’re going to be negotiating the text, the virus will be mutating.”

#### \*Patents are key to adequate regulation and testing of drugs -- AFF leads to rampant counterfeiting and unsafe medication, which threatens public health, kills most vulnerable patients, and causes narcotic/human trafficking to surge. Especially true now due to public desperation over COVID, rise in e-commerce, and expansion of substandard medicine manufacturers targeting critical life-saving drugs

**IPKey 21** (IP Key – Run by EUIPO and the European Commission to provide news coverage and scientific knowledge concerning intellectual property rights, “**Intellectual Property** and **Keep**ing **Medicines Safe**”, https://ipkey.eu/en/south-east-asia/news/intellectual-property-and-keeping-medicines-safe, 2 February 2021, EmmieeM)

If you are what you eat, and bad diets lead to bad health, imagine what unsafe medicines can do.

We ask today, why the provenance of vaccines has attracted so much attention when the origin of medicines we take, in some cases, every day and without even thinking, is not questioned at all? How do we know we can trust medicines readily available on the market from seemingly legitimate sources? Where does intellectual property (IP) come into all of this and why is **a proper IP application and registration process** important?

The global race to develop vaccines to fight the spread of COVID-19 has understandably captured the attention