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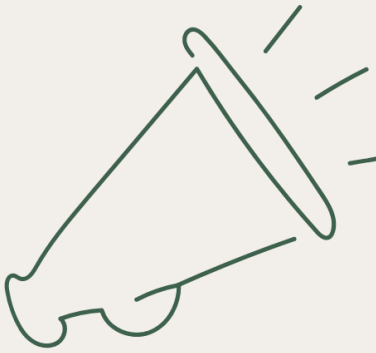

The Arkansas Journal of Social Change and Public Service

ARTICLES

NOTE

University of Arkansas at Little Rock
William H. Bowen School of Law

THE ARKANSAS JOURNAL OF SOCIAL CHANGE AND PUBLIC SERVICE

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ABOUT THE JOURNAL

The Arkansas Journal of Social Change and Public Service is a vehicle for identifying and addressing the pressing needs of our society. It examines issues lying at the intersection of policy, public interest, academia, and the law, raising awareness of topics insufficiently examined in traditional scholarly publications.

The Journal seeks contributions in a variety of formats not only from academics, but also from advocates, students, and members of the general public in an effort to provide the broadest possible array of analysis and opinion. This approach fosters dialogue that reaches beyond a single discipline or perspective.

Reflecting the fact that world events do not occur in semi-annual installments, the Journal's content is dynamic, with frequent updates occurring through the efforts of its staff and outside contributors.

The Journal will serve as a gathering place and a rallying point for those committed to public service, public policy, and public advocacy. A candid and open exchange of ideas will provide guidance in the formation of initiatives not only in Arkansas but throughout the world.

See ualr.edu/socialchange for more information on the Journal.

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EDITOR'S PREFACE

Connor Thompson

It is with great pleasure that the 2021-2022 Editorial Board presents Volume 11, Issue 1 of the Arkansas Journal of Social Change and Public Service. This issue marks the arrival of a new visual identity for the Journal, including an updated logo and a digital layout for our issues that mimics the cohesiveness of a print volume. This change makes each issue of the Journal perfect for reading on tablets and other electronic devices and highlights themes that run throughout each issue.

For this issue, these authors analyze the legal implications of recent technologies and practices that are emblematic of this historical moment. From Blockchain to COVID-19 Personal Protective Equipment to TikTok trends, the topics addressed in this issue further the Journal's longstanding commitment to publishing work that addresses the current needs of our society.

In *Blockchain As a Social Regulator: Elaboration of Theory Foundations*, Dr. Vladimir Troitskiy asks the provocative question, "what if blockchain becomes the law?" His piece considers the potential of blockchain technologies to serve as a decentralized and transparent replacement for many of our existing legal practices, which he characterizes as a "social regulator." This comprehensive theoretical exploration considers the revolutionary effect these technologies could have on the fundamentals of law and social organization.

In her article *Help Was Not on The Way: Intellectual Property Liability Relief in a Pandemic Era*, Professor Kim Vu-Dinh makes a case for emergency relief from intellectual property liability to makers of PPE and medical devices in a pandemic. Her argument provides a balanced approach that furthers the public interest that would permit volunteers and makers to act during emergency shortages with less fear of IP infringement violations.

Finally, Alexis Pinkston's Student Note, *Bring It On In Real Life: Intellectual Property Law Still Fails To Protect Minority Creators* addresses the ways existing intellectual property law offers insufficient protection to minority creators whose creations become viral on social media. This piece uses the unique lens of the film *Bring It On* and the platform TikTok for exploring a racial justice issue that touches on fundamentals of IP and copyright doctrine.

We believe these articles offer topical and comprehensive analysis of pressing social issues and potential solutions for how the law can serve a more just society.

BLOCKCHAIN AS A SOCIAL REGULATOR: ELABORATION OF THEORY FOUNDATIONS

Dr. Vladimir Troitskiy[*]

I. INTRODUCTION

The recent development of blockchain and its applications in the virtual and natural realm brings expectations of a new technology that will affect everyone's life. However, "how?" and "when?" are still great discussion questions for the blockchain enthusiasts, philosophers, leaders, futurists, scholars, economists, and policymakers. There is hardly a blockchain project without a global perspective. The hype of blockchain, crypto and its fancy derivatives like Initial Coin Offerings ("ICOs") and Token Generation Events ("TGEs") have brought huge human resources and substantial financing into technology development. Inventing blockchain use cases became a competition involving multifaceted participants: IT companies, banks, transnational corporations, individuals. Lots of people are expecting a revolution, one which is able if not to turn the world upside-down, at least could destroy or rebuild some areas of social life.

Blockchain determinations vary in different sources. In this article "Blockchain" is used in reference to any distributed, immutable ledger that facilitates the process of recording transactions and tracking records on a peer-to-peer network without the need of any central clearing authority. Don Tapscott in his "Blockchain Revolution," published in 2016, states that "the technology likely to have the greatest impact on the future of the world economy has arrived, and it's not self-driving cars, solar energy, or artificial intelligence. It's called the blockchain."[1] Robert Herian underscores that "blockchain may indeed offer a unique technical opportunity to change cultures of transparency and trust within cyberspace, and as 'revolutionary' and 'disruptive' has the potential to shift global socioeconomic and political conventions,"[2] referring to the conceivable shift of world economy towards

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[1] DON TAPSCOTT & ALEX TAPSCOTT, BLOCKCHAIN REVOLUTION: HOW THE TECHNOLOGY BEHIND BITCOIN AND OTHER CRYPTOCURRENCIES IS CHANGING THE WORLD (2016).

[2] ROBERT HERIAN, REGULATING BLOCKCHAIN: CRITICAL PERSPECTIVES IN LAW AND TECHNOLOGY (2018).

planned model based on fair distribution by means of blockchain. Some research works pin expectations on blockchain as positioned to save an entire country, Bangladesh, from poverty and other hardships by digitizing transfers and identity verification.[3] Blockchain is widely referred to as a "catalyst to totally reshape [the economic] system in ways that are more powerful,"[4] defeat bureaucracy, [5] form a new mean of social communication, [6] revolutionize almost every industry[7] and change the world in many other senses.[8] The coming years are expected to be focused on experimenting and applying the disruptive applications of blockchain to all aspects of society. For many, "the indisputable fact is that Blockchain is here to stay and is radically changing how our society functions at all levels."[9]

Still, most use cases are lacking what can be called a "life-changing" global perspective. Crypto currencies and blockchain-based platforms will potentially facilitate and expedite transactions and accounting in the financial sector, ICO-type mechanisms may become a useful tool of fundraising in both for-profit and non-profit projects, smart contracts are hoped to make entering and maintaining contractual relationships more convenient and secure, other blockchain implications are seen as efficient tools for operational management, voting, healthcare, IP as well as various fields where identity verification or authenticity validation is essential. All these innovations are promising and can do our lives somewhat better and easier,

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[3] *E.g.*, Paul Bryzek, *Blockchain Positioned to Save Bangladesh*, MEDIUM (Feb. 26, 2018), https://medium.com/p/blockchain-positioned-to-save-bangladesh-9a7397c03a5b.

[4] Marc Andreessen, *Why Bitcoin Matters*, N. Y. TIMES (Jan. 21, 2014, 11:54AM), https://dealbook.nytimes.com/2014/01/21/why-bitcoin-matters.

[5] Bob Violino, *Can blockchain help fix government bureaucracy?* ZDNET (Feb. 27, 2019), https://www.zdnet.com/article/can-blockchain-help-fix-government-bureaucracy/.

[6] Carlos Cordon & Arturo Bris, *Is blockchain all hype? A financier and supply chain expert discuss*, THE CONVERSATION (Jan. 31, 2019, 10:53 AM), https://theconversation.com/is-blockchain-all-hype-a-financier-and-supply-chain-expert-discuss-106584.

[7] Bernard Marr, *30+ Real Examples of Blockchain Technology in Practice*, FORBES (May 14, 2018), https://www.forbes.com/sites/bernardmarr/2018/05/14/30-real-examples-of-blockchain-technology-in-practice/#2ccc9f6b740d.

[8] Jon Southurst, *Peter Thiel Claims Bitcoin Has the Potential to Change the World*, COINDESK (Nov. 15, 2013), https://www.coindesk.com/peter-thiel-claims-bitcoin-potential-change-world.

[9] Paul Bryzek, *A quick glimpse of Blockchain and its Revolutionary Applications*, MEDIUM (Jul. 5, 2018), https://medium.com/coinmonks/a-quick-glimpse-of-blockchain-and-its-revolutionary-applications-3624d2455e69.

or under some circumstances bring new dangers, but few of them can alter fundamentals of our world.

II. EXISTING BLOCKCHAIN USES

The most famous uses of blockchain for now are crypto currencies and related financial transactions platforms. As technology develops, some researchers predict extinction of traditional currencies[10] and of what we now call banks [11] and consequently narrowing the role of central banks worldwide. [12] However, these trends are not formed exclusively by blockchain. Harbingers of world banking system shift towards digital platforms which appeared long before Bitcoin gained its top position in daily news headlines. For many in the industry, it was obvious already in the first decade of the present century, and even earlier, that small retail banks will disappear being unable to invest in complicated IT platforms,[13] transactions of individuals will be handled by non-banking payment networks[14] and eventually the fiat money can cease to exist.[15]

The development of interstate integration and other types of economic cooperation along with software and hardware progress were key factors to initiate a wide discussion on what will replace fiat money and banking systems in facilitating exchange. Just as monetary emissions rights stopped

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[10] *E.g.*, Frank Holmes, *Bitcoin could replace cash in 10 Years*, BUS. INSIDER (May 1, 2018, 5:44 PM), https://www.businessinsider.com/bitcoin-might-replace-cash-10-years-2018-5.

[11] *E.g.*, Glyn Britton, *Why retail banks will disappear*, FINTECH FUTURES (May 4, 2018),https://www.bankingtech.com/2018/05/why-retail-banks-will-disappear.

[12] *E.g.*, PRIMAVERA DE FLIIPPI & AARON WRIGHT, BLOCKCHAIN AND THE LAW: THE RULE OF CODE 70 (2018).

[13] *E.g.*, Rob Cox, *So Long, Bailey Building & Loan*, N. Y. TIMES, (Dec. 22, 2010), https://www.nytimes.com/2010/12/23/business/23views.html.

[14] *E.g.*, Odysseas Papadimitriou, *Why You Will Soon Cut Up Your Debit Card*, FORBES (Dec. 7, 2010, 6:28 PM), https://www.forbes.com/sites/moneybuilder/2010/12/07/why-you-will-soon-cut-up-your-debit-card/#666544da6562.

[15] *See* Bruce Champ, *Private Money in our Past, Present, and Future*, FED. RSVR. BANK OF CLEVELAND (Jan.1, 2007), https://www.clevelandfed.org/newsroom-and-events/publications/economic-commentary/economic-commentary-archives/2007-economic-commentaries/ec-20070101-private-money-in-our-past-present-and-future.aspx.

being an unequivocal sovereignty attribute[16] or "barter was supplanted first by commodity money and then by fiat money because these were superior transactions technologies," [17] so various digital currencies and their transmission platforms started to partially replace fiat money long before someone named Satoshi Nakamoto introduced Bitcoin as a decentralized digital currency.[18] From this point of view, the blockchain technology in finance is just a next step in its evolution.

Another candidate to become a revolutionary use of blockchain is voting, meaning using blockchain to collect votes and eventually express the general will of voters. There should be two subcategories of voting mentioned. The diverse set of situations when, for example, fans vote for a favorite singer to advance him in a radio chart, support a new movie, an actor, or a scientific article, put a like to an Instagram post, vote in a survey on quality of banking service in local branch, or choose a speaker for a college commencement ceremony could be called "private voting." Such voting should be considered to be a form of measuring common opinion rather than common will. Accusations of chart manipulation have been surrounding the entertainment industry for years,[19] debunking the reputations of the artists or art pieces brought to the top, and thus affecting credibility of the organizers. Utilizing blockchain technology to take the vote counting and voters' identification away from biased organizers is an absolute benefit. This process is already on the move and there are many blockchain based technical solutions implemented for private voting usage. Although filled with good intentions, nothing is changing the world yet.

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[16] Many relatively small countries (Ecuador, Salvador, Panama, Zimbabwe, Palau and others) started using foreign currency instead of their own. *See* Lawrence Wintermeyer, *Could Developing Nations Follow El Salvador's Move To Bitcoin?*, FORBES (August, 5 2021) https://www.forbes.com/sites/lawrencewintermeyer/2021/08/05/could-developing-nations-follow-el-salvadors-move-to-bitcoin/?Sh=7021f02a28b7. Moreover, the European Union introduced EURO in 1999 following the 1993 Maastricht treaty as a European currency replacing national currencies. *See* https://europa.eu/european-union/about-eu/euro/history-and-purpose-euro_en.

[17] Forrest H. Capie et al., *Modelling Institutional Change in the Payments System, and its Implications for Monetary Policy*, INSTITUTIONAL CHANGE IN THE PAYMENT SYSTEM AND MONETARY POLICY 63 (Stefan W. Schmitz & Geoffrey Wood eds., 2007).

[18] De Filippi & Wright *supra* note 12, at 20.

[19] *E.g.*, *Realtime Music Charts May Undergo Changes or Be Abolished After Chart Manipulation Controversy*, SOOMPI (May 15, 2018), https://www.soompi.com/article/1170839wpp/realtime-music-charts-may-undergo-changes-abolished-chart-manipulation-controversy.

The other type of voting could be named "public," "civil," or "political" voting. It results or may result in important political decisions: creating rules of law or appointing political figures that are to create rules of law. In this case, voting is the mechanism by which the will of individual voters is measured and expressed as a general will of the community. Cybersecurity and voter scams have been one of the major concerns for democratic ruling to be effective. When, in 2016, rumors about external IT interference into the United States presidential elections became one of the most popular discussion issues nationwide, it was not the first time when voter legitimacy has been questioned. Voices all over the place alarmed that voting fraud poses a major threat to the fundamental stability of democracies throughout the world, including the United States.[20]

Blockchain technology can make various types of elections and referendums more transparent, almost exclude voter fraud risks, and even eliminate the necessity for the voters to attend polling stations. Some blockchain believers assure that the "technology can offer an immutable, 100% accurate digital vote-counting system. This technique can secure an election's voter enrollment and accounts for the voter's id to ensure each vote is not tampered or modified as a result of the immutable nature of Blockchain."[21] Blockchain will add legitimacy and credibility to the voting process: a voter could have no doubt that his vote is accurately recorded and counted while simultaneously remain anonymous to everyone who may observe the ledger. "Just as Blockchain functions as a general ledger for cryptocurrencies, it may also create a permanent and open public ledger for the votes counted—promising equitable, democratic elections all over the world."[22]

In 2018, during midterm elections in West Virginia, an experiment was conducted. Overseas citizens and members of the military from twenty-four counties had the option to vote using an app called Voatz.[23] This blockchain-based app records participants 'votes, and then ballots are transmitted to processors that make vote validation before the votes are counted. The app uses end-to-end encryption and biometric verification, such as through the

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[20] *See* Bryzek, *supra* note 9.

[21] *Id.*

[22] *Id.*

[23] Aaron Wood, *West Virginia Secretary of State Reports Successful Blockchain Voting in 2018 Midterm Elections*, COINTELEGRAPH (Nov. 17, 2018), https://cointelegraph.com/news/west-virginia-secretary-of-state-reports-successful-blockchain-voting-in-2018-midterm-elections.

fingerprint or eye-scan technology built into some smartphones.[24] There is an obvious scalability of this experience; it can be expanded nationwide and obviously may be implemented in other countries. It adds convenience, and it potentially allows having more voters, bringing in those who are out of state or not willing or incapable to visit polling stations.

Yet there are numerous voices expressing concerns about using blockchain for civil voting.[25] Most of these voices criticize existing technical solutions that are obviously not ideal; but the further-evolved technology seems to becoming an effective tool. However, for nations that are developed democracies it can hardly be called a great shift. Electronic voting, for example, is available in many US elections,[26] is supported by modern security technologies, and covers almost all advantages attributed to Voatz or analogical solutions except for the use of a distributed network. The distributed data storing mechanism prevents those that control the electoral management (individuals who are in charge of technical control of the centralized server) to manipulate the elections. In other words, blockchain technologies prevent cheating by manually changing protocols for the centralized server that leads or may lead to distortion of the results and hence misrepresenting of the voters 'will. Can it potentially revolutionize political elections in developed countries? It is hardly so. In spite of some concerns, developed democracies have a reasonably good system of voter fraud prevention through established effective legal mechanisms of vote counting. Numerous studies have shown that voter fraud in the US is rare and is more of a myth than a real threat.[27] Blockchain can make voter fraud almost impossible, but apparently it will hardly change much. Eventually the same people will be elected, and the same decisions will be accepted on referendums.

Using blockchain technology for countries with much less developed

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[24] Vanessa Bates Ramirez, *Could Blockchain Voting Fix Democracy? Today, It Gets a Test Run*, SINGULARITYHUB (Nov. 6, 2018),https://singularityhub.com/2018/11/06/could-blockchain-voting-fix-democracy-today-it-gets-a-test-run/#sm.000018j0ann4l2e46wypzzav8u29m.

[25] *See* Stephen Shankland, *No, blockchain isn't the answer to our voting system woes*, CNET (Nov. 5, 2018, 5:00 AM), https://www.cnet.com/news/blockchain-isnt-answer-to-voting-system-woes.

[26] *E.g.*, Gloria Lin & Nicole Espinoza, *Florida Congressional Elections: November 2006*, ELECTRONIC VOTING, https://cs.stanford.edu/people/eroberts/cs181/projects/2006-07/electronic-voting/index_files/page0004.html (last visited May 19, 2019).

[27] *See Debunking the Voter Fraud Myth*, BRENNAN CENTER FOR JUSTICE (Jan. 31, 2017), https://www.brennancenter.org/analysis/debunking-voter-fraud-myth.

democratic culture could seem like a great idea. There are many countries on this planet that are notorious for electoral manipulations, allowing leaders to be reelected endlessly, as well as pro-government parties to maintain majority in the parliament. The blockchain technology could resolve it all by putting some overextended periods of ruling to an end, stopping manipulations, and eventually letting the people of these countries elect whomever they want to elect. But it will never happen. Most of these 20+ year rulers are authoritarian leaders who are not going to step down. They fully control voting management and voting processes and will never allow any technology to revoke their manipulation mechanisms as it will remove them from power and potentially bring them to jail. Such countries would probably need an "offline" revolution first in order to give way to integrating blockchain technologies into the voting process.

III. HOW BLOCKCHAIN MAY CHANGE THE LAW

Most lawyers and researchers rushed to examine legal aspects of various blockchain use cases and to look for answers to the questions like: "How to regulate blockchain?"[28]" Will blockchain technologies replace lawyers?"[29] "How could governments employ blockchain as a regulatory tool?"[30] And even more practically oriented questions, like "Are crypto currencies legal?" "Are incomes in crypto currencies taxed and how?" [31]" Is the WIPO convention applicable to blockchain?" [32]" Are smart contracts based on blockchain technology enforceable?"[33]" May blockchain be used to store

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[28] Trevor I. Kiviat, *Beyond Bitcoin: Issues in Regulating Blockchain Transactions*, 65 DUKE L.J. 569 (2015).

[29] Ameer Rosic, *Smart Contracts: The Blockchain Technology That Will Replace Lawyers*, BLOCKGEEKS (Nov. 25, 2020), https://blockgeeks.com/guides/smart-contracts/.

[30] Dennis Kunschke & Stefan Henkelmann, *Blockchain & Cryptocurrency Regulation 2019 Germany*, GLOBAL LEGAL INSIGHTS, https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/germany (last visited May 16, 2019).

[31] Mordecai Lerer, *The Taxation of Cryptocurrency: Virtual Transactions Bring Real-Life Tax Implications*, THE CPA J. (Jan. 24, 2019), https://www.cpajournal.com/2019/01/24/the-taxation-of-cryptocurrency.

[32] Birgit Clark & Baker McKenzie, *Blockchain and IP Law: A Match made in Crypto Heaven?*, WORLD INTELL. PROP. ORG. MAG., Feb. 2018, at 30.

[33] Cardozo Blockchain Project, *"Smart Contracts" & Legal Enforceability*, CARDOZO L. (Oct 16, 2018), https://cardozo.yu.edu/sites/default/files/2020-01/smart_contracts_report_2_0.pdf.

property records and votes?"[34]

The emerging popularity of smart contracts raises questions regarding the impact that they will have on the legal system. The abolishment of the legal system is not a plausible consequence.[35] By using technology, contracting parties would gain the ability to create arrangements that are hard to modify, dynamic, and potentially less ambiguous than traditional legal contracts.[36] Once again, smart contracts are seen as a progress in the current legal system, which will make it somewhat better and more accessible for the general public.

There are other creative ideas on possible applications of blockchain in law. Using blockchain in dispute resolution is encouraging, but generally can be characterized as a secure and effective tool to streamline existing processes in managing arbitration proceedings.[37] Storing copyright data by means of blockchain, and further using it to resolve IP disputes, is another interesting suggestion which is already experimentally implemented in some countries.[38] These are all very promising use cases that can adjust traditional law practices, reshape legal procedure, and change the nature of law-related businesses and jobs. However, there is another implication of blockchain technology for the law as a social institution. This implication only peripherally attracted the attention of researchers. What if blockchain becomes the law? In other words, what if blockchain becomes the mechanism of social regulation?

A lot has been discussed about smart contracts, which, in addition to being a secure and convenient way of data exchange and storage, are also a new way of expressing parties 'wills. With many people being involved, the blockchain technologies are becoming the channel to directly, reliably, and what is most important, legitimately expressing the majority will. This can be

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[34] Don Tapscott & Alex Tapscott, *The Impact of the Blockchain Goes Beyond Financial Services*, HARV. BUS. RES. (May 10, 2016), https://hbr.org/2016/05/the-impact-of-the-blockchain-goes-beyond-financial-services.

[35] Maria-Laura Gotcu, *Legal Breakthrough for Blockchain Technology* 29 (Tilburg University 2016), http://arno.uvt.nl/show.cgi?fid=142016 (last visited June 1, 2019).

[36] Cardozo Blockchain Project, *supra* note 34.

[37] *See* Nevena Jevremović, *2018 In Review: Blockchain Technology and Arbitration*, Kluwer Arb. Blog (Jan. 27, 2019), http://arbitrationblog.kluwerarbitration.com/2019/01/27/2018-in-review-blockchain-technology-and-arbitration.

[38] *E.g.*, Ana Berman, *Russian Intellectual Property Court Trials Blockchain to Store Copyright Data*, COINTELEGRAPH (Dec 4, 2018), https://cointelegraph.com/news/russian-intellectual-property-court-trials-blockchain-to-store-copyright-data.

a will of the homeowners of a condo, of populations of a town, a continent, the world, or the will of the majority of members of any social group, no matter professional, age or gender-based. Can the will expressed via such channel become the law? In other terms, the question could be whether a group of condo owners or a community of city residents can become a Decentralized Autonomous Organization (DAO)?[39] Or even more, can the entire world become a DAO? Yes, we assume, it can.

Many studies agree that blockchain can transform the government[40] and limit its authority, thus presenting a channel for a more direct democracy.[41] Government resources are constrained, and blockchain-based solutions could increase efficiency in the government's ongoing challenge with reconciling intragovernmental transfers,[42] in distribution of social benefits,[43] in state compliance and managing public records,[44] in government borrowing,[45] and in many other smaller and bigger issues. This could serve as an explanation to the wide interest of the governments across the globe in developing their own blockchain projects. The diversity of such countries is maximal. On one side, these are small IT advanced states like Singapore[46] or Estonia[47] taking

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[39] DAO (Decentralized Autonomous Organization) here and after is used as a reference to a community of members of any decentralized blockchain based network.

[40] *E.g.*, *How the Blockchain can transform Government*, KNOWLEDGE@WHARTON (July 5, 2018), https://knowledge.wharton.upenn.edu/article/blockchain-can-transform-government.

[41] De Filippi, *supra* note 12.

[42] *See* Kate Boeding & Richard McConkie, 3 *Potential Benefits of Blockchain For Government*, BOOZ | ALLEN | HAMILTON, https://www.boozallen.com/s/insight/blog/3-potential-benefits-of-government-blockchain.html (last visited May 29, 2019).

[43] *How the Blockchain can transform Government*, *supra* note 40.

[44] *See* Brian Forde, *Using Blockchain to Keep Public Data Public*, HARV. BUS. REV. (Mar. 31, 2017), https://hbr.org/2017/03/using-blockchain-to-keep-public-data-public.

[45] *See* Joseph Birch, *Government Bonds: How Blockchain Can Beat the Red Tape*, COINTELEGRAPH (Oct. 3, 2018), https://cointelegraph.com/news/government-bonds-how-blockchain-can-beat-the-red-tape.

[46] *See* Nicholas Say, *Singapore Emerges as Premier Blockchain Development Destination*, BLOCKONOMI (Nov. 1, 2018), https://blockonomi.com/singapore-blockchain-destination.

[47] *See* Anne Veerpalu, *Tartu Node*, 1 STAN. J. BLOCKCHAIN L. & POL'Y 124 (2018).

efforts to implement effective government services digitalization. Even small, much less digitalized ex-offshores like Malta, Lichtenstein or Puerto Rico are enacting blockchain-friendly regulation as part of their attempt to replace fading revenues of their offshore industries that were almost exterminated in the course of the last decade by Organization for Economic Development and Cooperation (OECD) and Internal Revenue Service of the United States (IRS)[48]. On the other side, we can see the largest countries in the world, including western democracies, and highly populated developing countries like India, Bangladesh, China,[49] and notorious dictatorships or authoritarian countries like Venezuela[50] or Iran,[51] that have been living under international sanctions for decades. They all want blockchain, but for radically different political purposes. For some countries. blockchain is the way to enhance democracy and transparency as described above, but for others, it is a promising tool to sidestep financial sanctions[52] or "expand the power of rigid and authoritarian regimes, which would gain a greater ability to control their citizens through a series of self-executing code-based rules."[53] All mentioned use cases have one thing in common: the governments are somehow employing blockchain technologies to make themselves more efficient or more powerful. Consequently, blockchain is widely seen as an instrument to conquer influence on the international scene.[54] However, this

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[48] Vladimir Troitskiy, *Trends in International Tax Planning: New Qualifications and Tax Jurisdiction Shopping*, in CHALLENGES OF THE KNOWLEDGE SOCIETY 836-37 (Gabriel Boroi, et al. eds., 2019).

[49] *See* Andreas Sandre, *Blockchain for government*, HACKERNOON (June 2, 2018), https://hackernoon.com/blockchain-for-government-41e3b097356d.

[50] *See* Kirk Semple & Nathaniel Popper, *Venezuela Launches Virtual Currency, Hoping to Resuscitate Economy*, N. Y. TIMES (Feb. 20, 2018), https://www.nytimes.com/2018/02/20/world/americas/venezuela-petro-currency.html.

[51] *See* Yaya Fanusie, *Blockchain Authoritarianism: The Regime in Iran Goes Crypto,* FORBES (Aug. 15, 2018, 9:30 PM), https://www.forbes.com/sites/yayafanusie/2018/08/15/blockchain-authoritarianism-the-regime-in-iran-goes-crypto.

[52] *See* Nathaniel Popper Et Al*., Russia and Venezuela's Plan to Sidestep Sanctions: Virtual Currencies,* N. Y. TIMES (Jan. 3, 2018), https://www.nytimes.com/2018/01/03/technology/russia-venezuela-virtual-currencies.html.

[53] De Filippi, *supra note* 12, at 203.

[54] *E.g.,* Li Jie*, China's Ambitious Blockchain Plans Could Cast US Dollar out of the Game,* THE EPOCH TIMES (Apr. 1, 2019), https://www.theepochtimes.com/chinas-ambitious-blockchain-plans-could-cast-us-dollar-out-of-the-game_2849020.html.

is only one implication of blockchain in making politics.

We're still in the early stage of blockchain technology evolution, but looking to the future of politics in a broader sense, the potential appearance of rules that are not sanctioned by any governments at all, but approved by the majority of people or companies covered by this type of regulation should attract even more attention. Such a mechanism has a potential of making significant shifts or even rebuilding social structures and hence, is a better candidate to match revolutionary aspirations. The blockchain ruling, or the blockchain regulation, (meaning not self-regulation of blockchain systems or networks, but rather blockchain as a tool for regulating behavior by means of gathering positions of individuals and providing an interpretation of the will of majority) is a phenomena definitely worth a comprehensive study.

The modern law is inextricably linked with the state. There are well-known theoretical disputes on the character of this relationship,[55] but in real life, laws are the products of the state and its institutions. Governments either create rules or sanction them. Laws are generally territorial and are thus limited by the state's territorial sovereignty. The international law is also a product of the state as it is a result of some form of meeting of wills of states.[56] We make a hypothesis that blockchain regulation can be totally delinked from the state, functioning as a direct implication of people's will and can be applicable to the groups of people regardless of existence or absence of any link with the state (citizenship, residency, physical presence) or its territory. Such regulation can also have its own mechanisms of enforcement and other attributes of a regulatory system.

Though this construction might seem rather hypothetical, it is high time to start such research. The future is coming faster than ever and the penetration of blockchain technology rolls progressively. We have most of the elements of the structure in place. There are test samples – elements of the system presented by efforts of some governments to build crypto economies and attempts to establish "crypto sandboxes"[57] – zones where

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[55] *See* Hans Kelsen, *Law, State and Justice in the Pure Theory of Law,* 57 YALE L. J. 377 (1947-1948).

[56] David Held, *Law of States, Law of Peoples: Three Models of Sovereignty*, 8 LEGAL THEORY 1 (2002).

[57] Here we refer to steps taken by the government of Switzerland and some announcements made recently by the governments of the UK (https://www.coindesk.com/markets/2018/07/09/uk-watchdog-welcomes-first-crypto-startups-to-regulatory-sandbox/), Hong Kong (https://www.reuters.com/article/us-hongkong-regulator-crypto/hong-kong-securities-regulator-to-propose-sandbox-for-crypto-exchanges-

crypto-based regulation will be applicable to business activities. We even have the opportunity to explore a prototype, such as an experiment to establish Crypto Utopia in Puerto Rico to live above (or outside of) government regulations.[58]

Sourced directly from individuals or companies, rules formulated through blockchain platforms meeting criteria of transparency, efficiency, quickness, and stability (protected from arbitrary changes), will almost inevitably become a key use case of blockchain technology.

It is a good time to review the law theory and try to model whether such blockchain regulation would undermine its fundamentals and whether our modern legal science can accommodate this new phenomenon. The methodologies that are to be employed will primarily include traditional comparative legal study as well as modeling, which is less common for legal science. It should be an instrumental (concept building) research deep into nuances of the conceptual framework of legal doctrine, focused on systematization as well as functional, structural, and dialectical analysis of blockchain regulations that only may appear in the imminent future.

IV. VIEWS ON BLOCKCHAIN AS REPLACEMENT FOR THE LAW

The idea of blockchain regulation replacing traditional law is not new. Yet in 2015, Marcella Atzori researched blockchain technology as a "*hyper-political tool*, capable to manage social interactions on large scale and dismiss traditional central authorities."[59] She "advocates the role of the State as a necessary central point of coordination in society, showing that decentralization through algorithm-based consensus"[60] should be hardly anything more than a tool for governments to improve its performance and a *pre-political* instrument employed by civil society. The researcher's main argument is that risks of eliminating centralized governments or significantly diminishing their roles may bring numerous dangers and unprecedented shifts

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idUSKCN1N63DU), US (https://www.natlawreview.com/article/hardly-child-s-play-north-carolina-joins-growing-number-states-fintech-regulatory) and Russia (https://news.bitcoin.com/bank-of-russia-tests-services-related-to-cryptocurrencies/).

[58] *See* Nellie Bowles*, Making a Crypto Utopia in Puerto Rico,* N. Y. TIMES (Feb. 2, 2018), https://www.nytimes.com/2018/02/02/technology/cryptocurrency-puerto-rico.html.

[59] Marcella Atzori*, Blockchain Technology and Decentralized Governance: Is the State Still Necessary?,* SSRN*,* (June 13, 2016), https://ssrn.com/abstract=2709713.

[60] *Id.*

in balance between individual interests and the common good, falling within the concept of "*amoral antipolitics*." Containing a set of legitimate arguments, this position answers the question of whether blockchain technology should replace centralized governments or not. But it is hardly something that can be influenced. The snowball is already rolling, and the correct questions are whether blockchain can replace traditional regulation mechanisms, and if so, how it will affect the environment.

Primavera De Filippi concludes her comprehensive study "Blockchain and the law," acknowledging that blockchain technology development may lead to the establishment of "an alternative or complementary system, made up of self-enforcing technical rules that are much more rigid and restraining than traditional legal rules." [61] Blockchain regulation is called "Lex Cryptographica," and the order powered by code is "Algocratic Governance."[62] The "tyranny of code" is seen as a potential cost of liberation from centralized intermediaries.

Kevin Werbach in "The Blockchain and the New Architecture of Trust" considers Blockchain a potential substitute for law.[63] The "extralegal trust regime" is Werbach's name for Filippi's "Algocratic Governance", and such a regime is not seen as something that can "overwhelm the power of territorial sovereigns."[64] Numerous technical flaws, risks of corrupt outside data entries (data oracles), and the absence of "state-backed enforcement mechanism to fall back on" are reasons to designate blockchain technology as a complement or supplement to law rather than its potential substitution.

"Blockchains are a social technology, a new blueprint for how to govern communities," Paul Vigna and Michael J. Casey state in their "The Blockchain and the Future of Everything."[65] Self-sovereign identities can create a self-regulative world, but the authors do not provide details of the mechanism. However, they warn that society should not "let the people with the greatest capacity to influence this technology and shape it to suit only their narrow interests."[66] Wright and De Filippi, in 2015, were warning that we should examine the prospect of automated legal governance with great

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[61] De Filippi, *supra note* 12, at 203.

[62] *Id*.

[63] KEVIN WERBACH, THE BLOCKCHAIN AND THE NEW ARCHITECTURE OF TRUST, 171 (2018).

[64] *Id*. at 171.

[65] MICHAEL J. CASEY & PAUL VIIGNA, THE TRUTH MACHINE: THE BLOCKCHAIN AND THE FUTURE OF EVERYTHING, 14-15 (2018).

[66] *Id*. at 15.

caution as the consequences of its development could not be easily foreseen.[67] It was also stated, that "by automating the enforcement of the law, we may perhaps gain in efficiency and transparency, but we might eventually also reduce the freedoms and autonomy of individuals."[68]

To put all opinions in a nutshell, we can infer that most researchers agree that blockchain technology can become a social regulator. What is disputable is the efficiency of such regulation and its comprehensiveness. What is worrying everyone is that the result could be worse than what we have now. Without any doubt, risks related to automated legal ruling are enormous, and the drawbacks and flaws are numerous. However, this paper is not focused on researching the dangers that blockchain regulation of social relations can bring, the key issue for this research is whether the blockchain law theoretically can replace conventional law or not and if it can, what it will look like and what are the factors affecting the transition process. For instance, not many people enjoy getting old, but unfortunately, this process is ongoing and there is little sense to study whether it is good or bad being old compared to being young. Similarly, the transition to an automated decentralized regulation system, if theoretically viable, can become a self-driven autonomous process that rolls no matter if researchers, lawyers, politicians, or anyone else likes it or not.

V. BLOCKCHAIN AS A TYPE OF SOCIAL REGULATOR

We've been there before. This mantra is repeatedly applied to the idea that the introduction of the Internet in the 1990's brought to the global society the same aspirations as blockchain does now.[69] In the same fashion as today, many commentators feel inspired or frightened dealing with blockchain. Thirty years ago, the internet was simultaneously seen as life-changing technology, a threat to established social order, a universal solution, and a new reality. Though the internet has not yet destroyed the planet, changes that were brought to our lives by internet-related technologies should not be underestimated and in some regards, the world we are dealing with now differs drastically from what it used to be thirty years before and that, to some

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[67] Aaron Wright & Primavera De Filippi*, Decentralized Bockchain Technology and the Rise of Lex Cryptographia,* SSRN, (July 25, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2580664.

[68] Primavera De Filippi & Samer Hassan*, Blockchain technology as a regulatory technology: From code is law to law is code,* FIRST MONDAY (Dec. 5, 2016), https://journals.uic.edu/ojs/index.php/fm/article/view/7113.

[69] Marco Iansiti & Karim R. Lakhani, *The Truth About Blockchain,* HARV. BUS. REV., Jan. –Feb. 2017, at 118.

extent, is due to the existence of the internet. This comparison is relevant to emphasize the scope of expected changes but is less appropriate if we make a functional comparison.

From the legal analysis standpoint, to try the role of social regulator on blockchain, we should primarily look at other social institutions that perform or performed the same function. Presently, mainly governmentally set laws fulfill this job. There are numerous determinations of law in theory of law and philosophy. "Law is the source of the precepts we most need to direct us in our conduct,"[70] Marcus Tullius Cicero wrote in his famous De Ligibus. According to the Collins Dictionary, "law is a system of rules that a society or government develops in order to deal with crime, business agreements, and social relationships."[71] And this is pretty much the commonly accepted meaning for this term. Will the blockchain regulation still be the law? It doesn't matter much. Similarly, to whether or not a bitcoin is a contract in the traditional sense, both bitcoins and traditional contracts are *artifacts,*[72] and whether blockchain regulation is a law or not, it may perform the same function in the future and become a unique social-political phenomenon. This possibility fully depends on general acceptance, recognition, and acknowledgment, which altogether are called legitimacy.

To be clear on the subject of this particular research, we are talking about the blockchain-based social regulator that is neither created by governmental institutions[73] nor sanctioned, managed, or enforced by such. This is the essential distinguishing feature of a blockchain regulatory system: the absence of the regulator, and the absence of someone who has the monopoly in creating mandatory rules. One can argue that in modern democracies, governments are just intermediaries indirectly expressing the will of people. That is theoretically true, but governments are bad intermediaries. Besides being expensive and slow, governments are biased, corrupt, and transmit the will of citizens in grabbled way, so that what they eventually put into the law sometimes contradicts what citizens are expecting.

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[70] FRANCIS BARHAM, THE POLITICAL WORKS OF MARCUS TULLIUS CICERO: COMPRISING HIS TREATISE ON THE REPUBLIC, AND HIS TREATISE ON THE LAWS, 68 (1842).

[71] *Law*, COLLINS ENGLISH DICTIONARY (13th Ed. 2018), https://www.collinsdictionary.com/dictionary/english/law.

[72] Jeffrey M. Lipshaw, *The Persistence of "Dumb" Contracts* (Jan. 21, 2019), STAN. J. BLOCKCHAIN L. & POL'Y, https://stanford-jblp.pubpub.org/pub/persistence-dumb-contracts.

[73] Using the term *government* or *governmental* we refer to any governing institution authorized to establish regulation including but not limited to all types of parliaments, executive power bodies, courts and municipalities.

A second important distinction is that law is territorial, while blockchain regulation is, or at least may be, extraterritorial. The territoriality principle is the most basic principle of jurisdiction in international law.[74] Together with population, government, and sovereignty, they constitute four essential attributes of a state. Territory is both a physical and a legal reality. Territorial sovereignty allows governments to use its power over anyone living or present on the territory through establishing regulations and employing state enforcement mechanisms. Blockchain regulatory systems exists in a DAO, which can unite actors based on any criteria and its combinations, or remain random and hence is extraterritorial, unless "people living on a territory of some state" become a DAO. But even in that case, the blockchain regulatory system is absolutely unrelated to sovereignty concept.

The third important distinction also originated from the absence of the regulator — the absence of state-backed law enforcement mechanisms and punishment mechanisms. The absence of governmental tools of enforcing the rules does not mean that something should not take its place. On the contrary, there should be other enforcement mechanisms elaborated by the DAO.

The remaining essential characteristics of a blockchain regulatory system are to correspond to the attributes of conventional law. It should be a set of rules, and it should regulate human conduct. And it is supposed to. There are nuances though. The overwhelmingly popular opinion is that "not all laws can be easily translated into code." [75] Laws leave some space for interpretation, and code is a strict tool intolerant to ambiguity. "The translation of often fuzzy legal predicates, otherwise capable of expression in truth-functional logic, into digital proxies expressible in the non-ambiguous discrete units of code" is a huge challenge.[76] That is a legitimate argument. Mathematical language and human language are obviously not the same. Most authors compare mathematical or code language to the language of their own professional practice, let's say English, and the difference seems drastic. However, if a U.S. criminal lawyer tried to move his practice to a strongly different legal environment, let's say Russian commercial law or Chinese labor law, he would find the differences no less drastic. Not exclusively because of the new juridical language, but rather because of qualification discrepancies, different legal culture, and varied conceptual principles on which legal systems are based. It is a matter of time, education, and technology customization, but lawyers and common individuals will start

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[74] Santiago Torres Bernardez, *Territorial Sovereignty*, ENCYCLOPEDIA OF INT'L PUB. L. 10, at 487-94 (Rudolf L. Bindschedler et al. eds., 1987).

[75] De Filippi, *supra* note 12, at 199.

[76] Lipshaw *supra* note 72.

speaking "code." Looking one step ahead, we will face further concerns that "aspects of human thinking and interaction will continue to be the most difficult to replicate on a machine"[77] and that "*deciding* will remain something that is fundamentally different than *reasoning* by way of logic or code."[78] Both phenomena are adaptable and though differences will never disappear, human thinking and code reasoning will find the way to be parts of the same process.

As described above, many researchers as well as common people, share an opinion that blockchain is something revolutionarily new; many are charmed, while others are frightened by the radical changes it will bring us. Lawyers are not an exception. So, would it be the first time in human history anyone other than kings, or governments, or gods, can create, or sanction, or authorize "the law"?[79] Probably, it would not.

First of all, "law is not the only normative domain on this planet; morality, religion, . . . etiquette, and so on also guide human conduct in many ways that are similar to law."[80] Though partially the understanding of the nature of law is related to its interactions with other normative orders, like morality or social conventions, the comparison of blockchain regulation and these "other regulations" is relevant to a very limited extent. What these regulators are lacking is certainty in determination.[81] Besides, even having its own mechanisms of enforcement, these rules yield on importance of rules of law in the public mind and mostly serve as something that can complement law rather than substitute it. By contrast, blockchain regulation is widely seen as an instrument reducing uncertainty around interpretation or application of rules.[82]

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[77] *Id*.

[78] *Id*.

[79] We intentionally avoid deeper analysis of Natural law theory (lex naturalis) based on the idea that some rights are inherent to an individual by virtue of human nature and thus not dependent on being granted, authorized or sanctions by sovereign powers or need to be confirmed through any democratic mechanisms. This is a rather theoretic concept widely examined in law literature. For purposes of this paper, we focus on positive law that is a product of state sovereignty and the possibility of such mechanism as blockchain regulation to replace it in full or in part.

[80] Andrei Marmor & Alexander Sarch, *The Nature of Law*, STAN. ENCYCLOPEDIA OF PHIL. (Aug. 22, 2019),
https://plato.stanford.edu/entries/lawphil-nature/.

[81] Liam Murphy, *The Boundary of Law: Law, Morality, and the Concept of Law*, EDMOND J. SAFRA CTR. FOR ETHICS (Oct. 28, 2004), https://ethics.harvard.edu/event/boundary-law-law-morality-and-concept-law.

[82] De Filippi, *supra* note 12, at 195.

Comparing blockchain regulatory systems to public international law could bring us some interesting outcomes. Though public international law is undoubtedly created directly by states and its analogs (such as Holy See), or indirectly through their derivatives (International organizations), as a regulatory system it has much in common with blockchain regulation. The sovereign equality of all States as enshrined in the UN Charter[83] means that none of the states have the superpower to regulate the behavior of others, neither do other subjects of international law, including the UN. Instead of having a supreme regulator, international law entitles states to set rules through a consensus mechanism which they are to create. The absence of enforcement mechanisms supported by a higher power is a logical extension of the absence of a supreme regulator and once again states must somehow work together to make the rules work. Isn't that similar to distinguishing features we've identified while comparing traditional law and blockchain law? Many critics insist that nowadays international law is in a deep crisis.[84] We should agree that there are problems related to this mechanism's efficiency; however, one cannot deny that almost 65 years of international law history proves the ability of an autonomous system of law to exist without a supreme regulator. The argument potentially undermining the relevance of presented comparison is the size of "DAO." There are around 200 states in this world, [85] which is a very limited number of system members. Nevertheless, one should not forget that international intergovernmental organizations, though being creations of the states, are also subjects of international law and their will is separated from the will of their founders. Adding this category will legitimately allow us to increase the total number of actors involved in the regulatory system to 500,[86] which is still a relatively

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[83] U.N. Charter art. 2, ¶ 1.

[84] E.g., Rafael Domingo, *The Crisis of International Law*, 42 VAND. J. TRANSNAT'L L. 1543 (2009).

[85] There are 193 states members of the UN organization. (*See* Growth in United Nations membership, UNITED NATIONS (Nov. 15, 2021), https://www.un.org/en/about-us/growth-in-un-membership). In addition to this, Holy See and Palestine have the observer status in the UN (*See* Non-Member States, UNITED NATIONS (Nov. 16, 2021), https://www.un.org/en/about-us/non-member-states). We should also count partially recognized countries that are involved in public international law regulatory system (though with some restrictions), such as Republic of Kosovo, Turkish Republic of Northern Cyprus, South Ossetia Republic, Republic of Abkhazia, Sahrawi Arab Democratic Republic and others (*See* Not on the Map: The Peculiar Histories of De Facto States. Lexington, 2021).

[86] *See* Richard Woodward & Michael Davies, *How Many International Organizations Are There? The Yearbook Of International Organizations And Its*

small sample size.[87]

Another reference point for comparison is the nature of self-regulatory organizations: industry unions, bars, insurance associations, investment advisors 'associations, homeowners 'associations, etc. They are not government, but they set the rules that are mandatory and regulate behavior of not their members (insiders) only but also of the outsiders. It looks like a very close and applicable example. However, when we are trying to compare blockchain, the self-regulatory system, to the self-regulatory organizations, we can discover that names are sometimes confusing. These organizations create rules, but they do not establish a self-sufficient regulatory system. Governments delegate their regulatory functions to third parties similar to how some governments hire third parties to perform other public functions like penitentiary, tax collection, or even some foreign consulate services. Governments nonetheless strictly regulate "the self-regulation process", authorize self-regulatory organizations and their acts, as well as back them with state enforcement power.[88]

A.Lex Mercatoria

Some researchers characterize collections of international trade customs as examples of regulatory mechanisms different from national and international law.[89] Sergey Bakhin in 2002 published a book, "Sublaw:

Shortcomings, POL. STUD. ASS'N (Oct. 11, 2015), https://www.psa.ac.uk/insight-plus/blog/how-many-international-organisations-are-there-yearbook-international.

[87] Numerous scholars assume that individuals as well as sometimes transnational NGO's and multinational corporations can directly participate in relationships regulated by public international law backing that by argument of their ability to take part in international courts/tribunals procedure or their influence on international politics or economics. (*E.g.* Karen J Alter et. al., *Theorizing the Judicialization of International Relations,* 63 INT'L STUDIES QUARTERLY, 449-63 (2019). Leaving this discussion apart, we are to emphasize that neither individuals nor international NGO's and multinational corporations are creating or enforcing international law.

[88] The self-regulatory organizations practices are still a valuable research material and can serve as samples of consensus mechanism. Some of them may pioneer to employ blockchain as management and decision taking tool and such experience would be of great value as a prototype of some blockchain regulatory system elements.

[89] *E.g.*, PRINCIPLES OF EUROPEAN CONTRACT LAW: PARTS I AND II (Ole Lando & Beale G. Hugh eds., 2000).

International Codifications of Unified Contractual Law,"[90] characterizing both historical *lex mercatoria* and modern collections of trade customs as "Sublaw" meaning regulations which are not created or authorized through governmental institutions. There is much in common between *lex mercatoria* and Blockchain law. In the middle ages, the nascent *lex mercatoria* was a set of rules voluntarily followed by entrepreneurs relatively free from the regulation of states for the purpose of trade. The rules were created directly through repetitive behavior of traders accepted by others. Hence, the will of DAO participants (traders 'community) was not accumulated and interpreted by an intermediary but expressed directly through repetitive conduct. The flipside of this system was that it sometimes took a long time to form a rule and it was often difficult to understand the rule's formal meaning or whether the norm existed.[91] In its early and romantic stage, *lex mercatoria* was growing as a set of norms, procedures, and institutions outside of the state jurisdiction. However, in the course of time, the development of both trade and state changed its original characteristics. *Lex mercatoria* became more formal, easier to find and understand but also became subject to state sanctioning. As Ralph Michaels comments, "although an anational law merchant would be theoretically possible, the true *lex mercatoria* we are currently observing is not such an anational law."[92] Modern *lex mercatoria* is dependent on national norms and the freedom of contract they provide, as well as on the enforceability of arbitral awards by national courts.[93] It is sanctioned by legal systems mostly as customary law which is a recognized source of law within jurisdictions of the common law tradition. Moreover, it widely relies on intermediaries like UNIDROIT or the International Chamber of Commerce that are preparing and publishing sets of customs such as Principles of International Commercial Contracts or INCOTERMS.

In spite of its modern nature, the historical example of *lex mercatoria* is of a great value for this research. It proves the anational regulatory system that directly transforms the will of participants into functional rules. Meanwhile, the shortcomings of early *lex mercatoria* can be effectively cured when regulation is based on a blockchain technology. Norms can be established quickly, formally, and accessibly.

There are other examples of regulative environments not related to the

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[90] S.V. BAKHIN, SUBLAW: INTERNATIONAL CODIFICATIONS OF UNIFIED CONTRACTUAL LAW (2002).

[91] Gilles Cuniberti, *Three Theories of Lex Mercatoria,* 52 Colum. J. Transnat'l L. 369 (2014).

[92] Ralf Michaels, The True Lex Mercatoria: Law Beyond the State, 14 IND. J. GLOB. LEGAL STUD. 447 (2007).

[93] *Id*.

state. Technical regulations, both national and international, are worth mentioning. If we exclude such implications as sanitary requirements and other technical regulations related to safety, which are subjects of public interest, the technical standards are mostly formulated and brought into action via private channels. Intermediaries like industry unions, professional associations or other so called self-regulatory bodies, which are often authorized or supported by governments, present these channels.

The given examples are sufficient to prove the hypothesis that blockchain law can exist and function. The regulatory systems functioning in the absence of supreme power such as international law or historical lex mercatoria as well as self-regulatory mechanisms of professional associations and industrial unions form a strong ground for such statement.

VI. TECHNOLOGY ESSENTIALS AND BLOCKCHAIN LAW KEY CHARACTERISTICS.

What is discussed above is not exclusively about blockchain, but rather about any tool with a set of characteristics currently attributed to blockchain technology. These characteristics are: the ability to function as a decentralized network, immutability, provenance, finality, as well as ability to process large amounts of data rapidly.

In terms of human conduct regulation, these technical characteristics are transformed into socially valuable basics of the system:

A. Absence of sovereign or any other subject with superpowers (Distributed network);
B. Legitimacy – wide acceptance of set of rules as a regulatory regime. (Provenance and immutability, new mechanisms of trust);
C. Formal clarity (Finality);
D. Ability to function as boundary-free regulatory system (Decentralization and accessibility);
E. Accessibility for unlimited number of users (Data processing).

Blockchain-based protocols are layering additional technology to process what can essentially be thought of as small computer programs—what technologists often refer to as "smart contracts."[94] The peer-to-peer network using public-private key cryptography based on a set of rules aimed to manage how information is recorded in the shared database and verified by

[94] An introductory paper to Ethereum, introduced by its co-founder Vitalik Buterin before launch, which is maintained and available at https://ethereum.org/en/whitepaper.

the network can be called a "consensus mechanism."[95] This technology may allow "meeting of the minds" of unlimited numbers of people, accurately capturing each and every intent, being indicative of a parties 'will and producing the mathematical truth.

May the blockchain law theoretically replace conventional law? To answer this major question, we are to examine two issues. Can our planet become a DAO, type of a global smart social contract? Is there any critical function of conventional (state) law that cannot be performed by blockchain regulation?

To keep it simple, we will not develop the first question by researching when and under what condition all conscious human beings can become members of one DAO. It is obvious that every member should have relatively easy and reliable access to the network and be a little bit technically educated, which is not the case nowadays. However, the world is evolving.

When talking about each and every conscious person on earth being part of one DAO, then without any doubt the answer would be negative. There always will be someone out of the system; these could be disrupters, or technically illiterate people, people living in remote areas, or just people not willing to be parts of the system. What if everyone is not needed and an overwhelming majority is enough? Talking about conventional law, which is the product of sovereign power, we are aware that it does not cover everyone on this planet. This is not only about stateless people living in international waters. There were, and there are, territories that due to civil wars, natural disasters, or other reasons, are temporary not covered by regulation of any law. The example of Somalia is a relevant one.[96] In many countries, especially in rural areas, newborns are not always inscribed in civil registers and hence have no access to expressing their will through established conventional channels. According to research conducted by Inter-American Development Bank in 2007, up to 5% of newborn Paraguayans are not registered during first year of their life, and there are a number of people that live their entire life without any interaction with the state, including registration, voting, and receiving any documents or social benefits.[97] The mentioned examples do not undermine the credibility of law in general. Laws can be enforced despite some individuals intentionally or unintentionally existing out of the system or network. The fact that the government has not counted someone does mean that this person will not get protection or social

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[95] Cardozo Blockchain Project, *supra* note 33.

[96] *See* Stig J. Hansen, *Warlords and Peace Strategies: The Case of Somalia*, 23 J. CONFLICT STUD. 57 (2003).

[97] *See* DWIGHT ORDÓÑEZ BUSTAMANTE, EL SUBREGISTRO DE NACIMIENTOS EN PARAGUAY: LAS CONSECUENCIAS (2007).

benefits from the government. Instead, his opinion will not be taken into consideration in the law-making process, but it is not a problem as there is a sovereign that will decide for him. If an unregistered Paraguayan killed someone or tried to overthrow the government, there are few doubts that someone would come after him. The same thing would happen to any Somalian who leaves the territory of chaos, or even with a stateless person in international waters violating someone's rights and lawful interests. Thus, law is perceived as existing even by those who are ignored by governments or consider themselves out of the system. If we will imagine the universe of subjects of law as a DAO (though it isn't), then membership in this quasi-DAO is not voluntary, it is mandatory.

In contrast, participation in the real DAO is voluntary by nature. One can own Bitcoin, thus be part of Bitcoin DAO, and put his own will in decision making process. In his mind Bitcoin has its value, the DAO exists and everything happening inside the DAO really happens. On the other hand, someone who is not in the system can totally ignore both Bitcoin and network, and hence it has no value and virtually does not exist for that person. There is no sovereign or supreme power that will knock the nihilist's door and force him to buy Bitcoin and become part of the DAO. That means that blockchain law could be non-existent for those out of the DAO. Rule violations would not be treated as such, and there would be no coercion mechanism that could force someone to obey the DAO rules. However, it would be wrong to state that there would be no enforcement mechanism for blockchain law, and that there are no ways to bring outsiders into the DAO.

B.Execution and Enforcement: Perception, Acceptance, and Compliance

There could be three potential types of blockchain rule violators. Those that are out of the DAO and do not know that the rule exists, those that are out of the DAO, know about the rule but do not respect it and those that are part of the DAO, know that the rule exists but intentionally or unintentionally violate it.

The administration system addressing the last group depends on the DAO. If the particular DAO manages or is integrated into payment system, violations of rules can result in feasible sanctions like increased commissions, and additional fees and charges. Account blocking or limiting access to data could be examples of non-monetary penalties. However, sanctions are only one tool in the law enforcement system. The disapproval of peers, propaganda of proper behavior, and motivation can also work for blockchain regulation. Blockchain regulation can effectively employ most operations currently used by online businesses to motivate the users to behave properly. Take booking.com, Expedia, or any other tourist website providing hotel

booking services. The service provider sets some rules for the hotels including the accuracy of information available to the customers, time of response for requests, etc.; it is also interested in high clients 'satisfaction rate. Besides fines and financial benefits, these websites have a much more efficient way of influencing hotel's behavior – published customers reviews. Imagine a 5-star hotel that has an extremely low clients 'rating based on hundreds or thousands of reviews. Unless the market where it operates is not free, or it is priced strongly below the average, this business is in trouble.

Although the described mechanism is relatively "soft" as there are no fines or license suspensions, it can affect businesses stronger. For example, a hotel can pay a fine or renew a license, but due to low review rates it would get no clients and eventually be out of business. Platforms like AirBnB, Turo, Uber, and others, are used the same way to promote rule following, not only for the service providers, but for the clients as well, which implies for all users. These platforms are not decentralized, which means they can theoretically manipulate the clients 'reviews by erasing history or changing the way the average rating is counted, making it another source of revenue. Yet, if it would work as a decentralized tool, the manipulation becomes almost impossible. History will be stored forever and the consequences of receiving low reviews will be even more dramatic for the clients.

Applying that tool to blockchain law will mean rating members of the DAO according to their conduct. The network member with numerical characteristics showing that he or she has a history of violations will eventually be limited or restrained from entering almost any civil or commercial activity and, on the other side, the member with high ratios will be a desirable counterparty and will potentially receive favorable conditions entering social interactions.

The scalability effect and the size of the DAO can resolve acceptance and awareness problems. When the telephone system was introduced, the community of users was small, and the phone owners didn't have many numbers to call. Nowadays, though, people who do not use phones probably still exist, the normal social interaction undoubtedly assumes using phones for personal and business purposes, and the community of phone users is almost equal to the number of people that physically can use it. Hence, when most people around are using phones, internet, or are members of some DAO, remaining members of the community have few choices but to become part of this network even if they are not totally happy about that. Imagine that Bitcoin popularity drastically increased, and most people are using it at least from time to time and there are numerous services or goods that are not accessible for purchase by other means of payment but by Bitcoin. In this case, not being a Bitcoin user will place a person in a disadvantageous

position in many ways. Eventually, convenience and the ability to interact with other DAO members will become a strong motivator for those that are still "out" to step in, even though some of them probably do not like or do not trust Bitcoin.

However, disrupters will always be around. Yet, they are not critical for the system sustainability up until they are few. Those mentioned do not participate in formation of the law, but as described above, the law enforcement system possesses tools to enforce the rules even on those who refuse to admit the very existence of law. However, unless, in our attempt to forecast the future of social regulation we will rely on some sci-fi plot that describes world of machines controlling every minuscular area of social life, these mechanisms do not fit for blockchain regulation. The decentralized peer-to-peer law enforcement cannot do much to outsiders of the DAO or even to network members if they commit something serious which is absolutely beyond compare by its danger to society to any of the sanctions in the blockchain law arsenal. Sometimes it can spoil the outers 'life by cutting them from some socially sensible interactions as well as affecting financially, but blockchain regulation is not able to fully replace the law enforcement set of tools. Blockchain law system has no one to come after a killer, a robber, or a rapist, it can hardly sufficiently influence a monopoly seriously abusing its market position.

VII. CONCLUSION

Code is now capable of regulating and constraining our actions in a wide variety of ways. "Code can be the law" (*i.e.,* code having the effect of law) and "law can be the code" (*i.e.,* law being defined as code).[98] However, the replacement is not universal. The autonomous blockchain law can theoretically substitute the conventional law, but blockchain regulatory systems cannot entirely substitute conventional legal systems, which besides the norms include the process for interpreting and enforcing the law. And as soon as the network cannot exist on its own and requests at least some outside intervention, it is not fully autonomous and hence can eventually be affected by the same weak spots as the traditional law and legal environment is.

Nevertheless, the area of regulation where blockchain law can theoretically replace conventional law is huge. Such regulation can take care of the bulk of social relations now covered by private law and a substantial part of public law including such areas as administrative law, tax law, and labor law. For the rest of relations which may potentially request some physical interference of state enforcement power to be efficiently regulated,

[98] De Filippi, *supra* note 68.

it can also perform the key function in creating rules, complimenting enforcement systems, and controlling state enforcement. There are a number of factors and issues that will affect the probability of blockchain law taking over a big share of the regulatory pie and shaping the transition process.

As blockchain law is a global smart contract, it relies on smart contract principles and inherits all its drawbacks. Except for its initial programming, the DAO doesn't need outside help to determine how to carry out its mission – to regulate social behavior. The real issue is how to create a universal and "ideal" set of pre-programmed rules that describes what can happen in DAO, how it would gather wills of members, transform it into the will of majority and interpret it as the norm of "law." Who can take this burden of a "founder"? Is it possible?

We should return to the point where we discussed the target of this research. We are not discussing whether the replacement of conventional law by blockchain law will have positive or negative impact, but trying to realize whether such replacement is theoretically viable and if there are factors that can move this process forward.

This system of norms will not be ideal. Moreover, it can likely appear to be bad or scary. Anyone who will write the set of pre-programmed rules expressed in the form of the code that together will present a mechanism of creating rules by gathering intentions of users and effectuate regulation can become the founder. What can make this system global and allow it to take part in real competition with conventional law is the natural selection. By this we mean natural selections based on criteria of ability to survive as a self-regulation mechanism and avoid quick failure of the first DAO, sustainability, and universality of rules regulating as much as possible of what can happen in DAO. A lot will depend on chance, coincidence, and circumstances. There were many Facebook-like projects but there is no second FB, and there is no unequivocal answer why. The same reasoning is applicable to the blockchain regulation system: any regulatory protocol matching set of criteria turned into DAO may take a lead at some point and take over the regulation of social relations globally.

One of the key issues for currently existing DAO's is the "fork problem". Blockchain forks or blockchain forking is a situation when the blockchain software and data that is supposed to be synchronized for every user becomes desynchronized and, as a result, there is a split in the blockchain network. If the decision-making protocol provides relevant mechanism, DAO members can come to an agreement and resolve the fork issue by leaving only one chain branch but if they do not, then this potentially can result in the creation

of two versions of the blockchain.[99] In blockchain law, the case may turn into the existence of several "overlapping" regulative DAO's which in analogy to other blockchain systems may lead to the "fork competition."[100] The response to this challenge is obvious - the size limits controversy. Generally, the blockchain law is the tool to express majority will and the bigger the DAO is, the smaller is the chance for alternative reality to survive. Whether it will turn the world into a code tyranny – is out of the scope of this research. But without a doubt, the development of blockchain law will shift the regulation priorities towards populism and away from the needs of those deviating from the mainstream. The enforceable regulation is likely to step to the ground where it is not present now, fields like moral, religion, or ethics can suddenly appear to be regulated by imperative rules.

Blockchain law is a phenomenon that may influence the theory of law itself and will probably bring us to the foundations of natural law theory. The difference is that natural law is more of a theoretical concept whenever the blockchain regulation is an efficient modern technocratic tool. Natural laws are supposed to exist objectively and thus belong to everyone throughout their entire life with no need to be granted by sovereign or law;[101] blockchain regulation may exist quasi objectively, not dependent on will of state and its institutions. It may become a new measure of objectivity meaning "compound judgment of majority", competing with the traditional one meaning "lack of judgment and prejudice."[102]

Blockchain is coming whether society is comfortable with it or not. It is crucial that countries make an effort to incorporate blockchain into the impulse of evolving law, rather than its resistance creating the explosion of a revolution. The existing law theory might be reshaped, but most of its foundations will stand while accommodating blockchain-based tools. This

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[99] Neo C. K. Yiu, *An Overview of Forks and Coordination in Blockchain Development*, CORNELL UNIVERSITY (Nov. 15, 2021), https://arxiv.org/abs/2102.10006.

[100] *See* Joseph Abadi & Markus Brunnermeier, *Blockchain Economics*, NAT'L BUREAU ECON. RES. (Dec. 2018), https://www.nber.org/papers/w25407.

[101] Robert P. George, *Natural Law*, 52 AM. J. JURIS. 55 (2007).

[102] In my publications devoted to technical regulation I often refer to an act of municipal authority of City of Tomsk (Western Siberia, Russia) adopted in 2006, according to this act the criteria of the cold weather was stated. It was just a technical rule saying, "8'C(46'F) is cold". There was a higher-level legislation referring to this term, stating that heating season will start when the outside temperature becomes cold according to regional rules and standards. Which meant that unless the outside temperature falls below 8'C the central heating will be off. But most people felt cold even when outside temperature was 10'C or 15'C, however not "objective" atmospheric processes determine the coming of cold weather but the rule of law.

evolution, being slow and mild by character, has a strong potential to trigger comprehensive changes in the core values of modern social structure.

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HELP WAS NOT ON THE WAY: INTELLECTUAL PROPERTY LIABILITY RELIEF IN A PANDEMIC ERA

Kim Vu-Dinh[*]

I. INTRODUCTION

On January 21, 2020, the United States recorded its first case of COVID-19.[1] By April of that same year, numerous hospitals across the nation had exhausted entire reserves of personal protective equipment (PPE), with looming uncertainty as to when they would be replenished.[2] As infection numbers increased exponentially, global demand for some types of PPE increased by 1000%.[3]

Volunteers across the nation assembled teams of makers—some professionals, but also scores of amateurs—to craft the critical equipment needed to slow down the onslaught of the pandemic. From creating cloth masks to ventilator pistons, nonprofits and everyday citizens were able to partially alleviate a need that neither the private sector nor the government could address adequately.[4]

Extensive potential intellectual property (IP) infringement liabilities exist for these well-meaning volunteers. For example, using open-source, freely-dispersed blueprints could in fact be an unwitting violation of an obscure, pre-existing invention whose patent is buried deep within the unwieldy database of the U.S. Patent and Trademark Office. Moreover, the threat of liability extends beyond micromanufactuers to include also distributors, distribution facilitators, and those who circulate patented plans or copyrighted ideas.

Currently, no defenses to such infringement exist, dissuading would-be heroes from assisting during a great time of need. As one recent commentary

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[1] AJMC Staff, The Center for Biosimilar Blog, *A Timeline of COVID-19 Developments in 2020* (January 21, 2021), https://www.ajmc.com/view/a-timeline-of-covid19-developments-in-2020.

[2] Ken Budd, *Where is all the PPE?* (Mar 27, 2020), https://www.aamc.org/news-insights/where-all-ppe.

[3] Tahla Burki, *Global shortage of personal protective equipment*, Lancet Infect Dis., (July 2020) 20(7): 785–86.

[4] *See infra*, sections II (c).

notes, "[t]he threat of infringement also dampens the ability to innovate under conditions of emergency, intensifying the tension between the protection of IP and the protection of human lives."[5] Defendants could, however, look to other legal doctrines. In analogizing intellectual property to the common law,[6] one might argue for a Good Samaritan doctrine or to the necessity defense to trespass from tort law. As in landlord-tenant law, to the extent that rents for real property have been deferred during the time of the pandemic, perhaps certain instances of intangible property "rent seeking" by the owners of patents and copyrights might be justifiably put on hold as well.[7] Defendants in IP lawsuits could also look to creative applications of existing exceptions in patent law such as march-in rights and the Defense Protection Act.

Using this PPE and medical device production dilemma as a case study, this Article will consider the logistical and legal obstacles to accommodating public interest uses of intellectual property. My analysis will recommend a procedure that would limit or defer liability and provide appropriate remedies, and also would incentivize crucial and well-meaning acts in times of pandemic.

This Article will proceed in multiple parts. Part II provides a case study centering on the coronavirus pandemic and the PPE problem, illustrating that volunteers would benefit from relief from the threat of intellectual property infringement to incentivize their public interest efforts. Part III(A) outlines the growing trend of intellectual property jurisprudence in strengthening intellectual property rights to the extent some consider them moral rights as well as a critique of this trend. Part III(B) details the need for exceptions to intellectual property liability, focusing on other patentable subject matter valuable to the public domain during times of crisis. Part III(C) focuses on

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[5] Yaniv Heled, Ana Santos Rutschman & Liza Vertinsky, *The Need for the Tort Law Necessity Defense in Intellectual Property Law*, U. CHI. LEGAL F. (forthcoming) (manuscript at 1), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3642833&download=yes.

[6] This analogy is discussed at length in the context of IP takings. *See* Dustin Marlan, *Trademark Takings: Trademarks as Constitutional Property Under the Fifth Amendment Takings Clause*, 15 U. PA. J. CONST. L. 1581, 1616-18 (2013) (drawing on patent law precedent and finding that trademarks constitute, for better or worse, a similar form of property as real property). *See also* Irina D. Manta, *Keeping IP Real*, 57 HOUS. L. REV. 349, 349 (2019) (analyzing the relationship between IP and tangible property).

[7] *See* Brian L. Frye, *Literary Landlords in Plaguetime*, 10 N.Y. U. J. INTELL. PROP. & ENT. L. 225, 234 (2021).

copyright (though much is applicable in the realm of patent also) and deals conceptually with analogies to the common law—property and tort law—where safety valves to liability exist in the form of Good Samaritan laws, the public necessity defense to trespass, and moratoriums to eviction in the context of landlord-tenant law during COVID-19. Part III(D) explores other common law analogies available as a model for potential legislation.

II. THE THREAT OF IP LIABILITY IN A PANDEMIC ERA

Very few countries were prepared for such a quickly-evolving pandemic.[8] The U.S. went from fifteen cases on February 15, 2020 to 718,000 cases by May 15, 2020.[9] By July 26 of that year, the U.S. reported a staggering 4.1 million cases total and 145,000 deaths.[10] Vaccines have rolled out in the U.S., the UK, and Israel the most efficaciously, but because of wealth and distribution issues, countries of the European Union, let alone those in South America and Africa, are projecting widespread vaccination only from late 2021 to early 2023, respectively.[11] Some commentators argue that due to our globalist economy, an ineffective rollout of vaccines internationally leave us all vulnerable to a never-ending pandemic.[12] In short, while there has been a

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[8] *See, e.g., Two first coronavirus cases confirmed in Italy: prime minister,* REUTERS (Jan 30, 2020), https://www.reuters.com/article/us-china-health-italy/two-first-coronavirus-cases-confirmed-in-italy-prime-minister-idUSKBN1ZT31H; Ciro Indolfi and Carmen Spaccarotella, *The Outbreak of COVID-19 in Italy - Fighting the Pandemic,* J AM COLL CARDIOL CASE REP**.** 2020 Jul, 2 (9), 1414-1418; Barbie Latza Nadeau and Livia Borghese, *Europe's biggest countries are seeing Covid surges -- but not this one*, CNN (August 10, 2020, 3:06AM), https://www.cnn.com/2020/08/09/europe/italy-coronavirus-return-normal-intl/index.html.; *Italy Coronavirus Map and Case Count*, NY TIMES (As of 7/26/20), https://www.nytimes.com/interactive/2020/world/europe/italy-coronavirus-cases.html.; *Brazil Coronavirus Map and Case Count*, NY TIMES (As of 7/26/20), https://www.nytimes.com/interactive/2020/world/americas/brazil-coronavirus-cases.html. Also in July, President Bosonaro and his wife contracted the disease. *See* Alison Durkee, *Brazilian President Jair Bolsonaro Tests Positive For Covid-19***,** FORBES (Jul 7, 2020).

[9] *Id.*

[10] *COVID Data Tracker*, CDC, https://www.cdc.gov/covid-data-tracker/#cases (last visited on July 26, 2020).

[11] Stephanie Hegarty, *Covid vaccine tracker: How's my country and the rest of the world doing?*, BBC NEWS (Feb. 21, 2021), https://www.bbc.com/news/world-56025355.

[12] *See* Katherine Gammon, *Why a failure to vaccinate the world will put us all at risk, MIT Technology Review* (Feb 13, 2021) https://www.technologyreview.com/2021/02/13/1018259/why-a-failure-to-

return to semi-normalcy for those who have been vaccinated in the U.S., it is not clear whether or when the end is in sight for COVID-19.

A. Critical Shortages of PPE

Bombarded with a pandemic of this breadth and scale, hospitals all over the globe quickly extinguished their supplies of the most basic personal protective equipment (PPE) such as hospital gowns, face masks, and face shields, and started re-using them against CDC protocol.[13] An immediate shortage of ventilator parts and hand sanitizer also became apparent.[14] At the University of Washington in Seattle, an entire shipment of N95 masks was stolen off of its loading docks; at George Washington University Hospital in Washington DC, individuals walked into the hospital to steal massive quantities of supplies.[15] Indeed, in response to a 2020 American Medical Association (AMA) survey, more than one-third of a sample of 3,500 physicians reported that acquiring PPE was "very" or "extremely" difficult.[16] Smaller medical practices reported even greater difficulties—41% of doctors in practices of five or fewer members reported saying that PPE was "very" or "extremely" difficult to obtain.[17] As physician Susan R. Bailey put it:

> Nobody is immune to this. It doesn't matter who you are. If the president of the AMA is having a hard time finding PPE, that is a clear expression of how incredibly difficult it is for the entire physician population.[18]

As of Spring 2021, even with millions of Americans vaccinated against

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vaccinate-the-world-will-put-us-all-at-risk/; Jaimy Lee, *Dr. Osterholm: Americans will be living with the coronavirus for decades,* MarketWatch (Aug. 1 2020, 10:59 AM), https://www.marketwatch.com/story/osterholm-americans-will-be-living-with-the-coronavirus-for-decades-2020-07-30.

[13] Budd, *supra* note 2.

[14] Health care institutions, from great to small, also had insufficient COVID-19 tests. *See* Planet Money, *How to Test a Country*, NPR, at 9:16 PM (March 18, 2020), https://www.npr.org/transcripts/818072542. However, because there is no known occurrence of test duplication by lay people and lay organizations, and hence, no known risk of unwitting IP infringement in test development, we do not address this issue in this article. The content of this article focuses on equipment and supplies that were easily produced by lay people

[15] Budd, *supra* note 2.

[16] Kevin B. O'Reilly, *Amid PPE shortage, AMA collaboration offers supplier for doctors*, AMA (Apr. 13, 2021), https://www.ama-assn.org/delivering-care/public-health/amid-ppe-shortage-ama-collaboration-offers-supplier-doctors.

[17] *Id*.

[18] *Id.*

COVID-19, many physicians in the U.S. continue to report access problems relating to PPE.[19] Even among practices who can access PPE, costs remain a serious concern, with physicians spending on PPE rising above 57% in 2020.[20]

B. Government Response

The response from the federal government failed to effectively remedy the PPE shortages. Federal agencies did not remove barriers to enable the private sector to act in a timely manner. For instance, the U.S. Center for Disease Control (CDC) was unable to produce its coronavirus tests at the scale needed and requested the FDA to grant waivers permitting private sector manufacturers to develop and reproduce tests of their own.[21] Not until February 29, 2020 was such waiver given,[22] over one month after the first confirmed case in U.S.[23]

Similar patterns in response time were evident for medical device uses. Not until almost two months into the pandemic did the FDA issue emergency use authorizations (EUA) allowing hospitals and other healthcare providers to use certain devices that had not yet gone through FDA approval, or had received approval for other uses but not the ones needed to serve the COVID-19 patients.[24] The EUA was accompanied by a declaration limiting liability for manufacturers of such devices.[25] This declaration was reserved, however, only for certain diagnostic tests, decontamination systems, respirators, certain ventilator parts, and face shields; it did not address reproduction of gowns, gloves, or non-respirator face masks and the protection was primarily focused on PPE made by professional manufacturers of similar devices made in other countries with their own national standards. In short, the protections were limited to those companies and individuals who were already in the

[19] *Id.*

[20] *Id.*

[21] Budd, *supra* note 2.

[22] *Coronavirus (COVID-19) Update: FDA Issues New Policy to Help Expedite Availability of Diagnostics* (February 29, 2020), https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-issues-new-policy-help-expedite-availability-diagnostics.

[23] *Coronavirus Disease 2019 (COVID-19) Emergency Use Authorizations for Medical Devices*, FDA https://www.fda.gov/medical-devices/emergency-use-authorizations-medical-devices/coronavirus-disease-2019-covid-19-emergency-use-authorizations-medical-devices (last visited on Aug 10, 2020).

[24] *Id*; *See also Public Readiness and Emergency Preparedness Act*, PHE, https://www.phe.gov/Preparedness/legal/prepact/Pages/default.aspx (last visited on Aug. 10, 2020).

[25] *Id.*

manufacturing industry.[26]

The White House under President Trump also stumbled in invoking its authority created by the Defense Production Act (DPA).[27] The DPA was passed in 1950 at the start of the Korean War and was modeled after the War Powers Act that allowed President Roosevelt to control the domestic economy in wartime to make sure that the country had sufficient medical and military supplies.[28] Unlike the War Powers Act, wartime is not a required condition, and the DPA has been frequently used since its inception to fulfill government contracts for a variety of sectors, including defense.[29] For example, the DPA can be used to address and prepare for natural disasters and other cataclysmic events, even before such events occur.[30] Amongst many other things, the DPA enables the Office of the President to require private sector manufacturers to prioritize government orders and set production and distribution priorities for needed equipment.[31] It also allows the President to order companies to recalibrate their factories to address shortages of supply.[32] The Pentagon estimates that it invokes the DPA on at least 300,000 orders a year for various types of military equipment.[33] FEMA has frequently used it to address food and bottled water shortages following hurricanes.[34] However, 2020 was the first time it was used to address a public health emergency.[35]

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[26] "Section V: Covered Persons . . . manufacturer includes a contractor or subcontractor of a manufacturer; a supplier or licenser of any product, intellectual property, service, research tool or component or other article used in the design, development, clinical testing, investigation or manufacturing of a Covered Countermeasure; and any or all the parents, subsidiaries, affiliates, successors, and assigns of a manufacturer…" *Id.*

[27] Camila Domonoske, *White House Not Using Defense Powers To Boost Medical Supplies*, N.P.R. (Mar. 23, 2020), https://www.npr.org/2020/03/23/820074051/white-house-not-using-defense-powers-to-boost-medical-supplies; *see also* Maegen Vazquez, *Trump invokes Defense Production Act for Ventilator Equipment and N95 Masks*, CNN (Apr. 2, 2020), https://www.cnn.com/2020/04/02/politics/defense-production-act-ventilator-supplies/index.html.

[28] *Id.*

[29] *Id.*

[30] *Id.*

[31] *Id.*

[32] *Id.*

[33] Anshu Siripurapu, *What Is the Defense Production Act?* (Apr. 29, 2020), Council on Foreign Relations website available at https://www.cfr.org/in-brief/what-defense-production-act.

[34] *Id.*

[35] *Id.*

President Trump openly expressed hesitation in using the DPA, likening the U.S. to Venezuela should the U.S. choose to use the powers of the DPA to compel companies to produce PPE.[36] He eventually used the DPA on March 27, 2020 to require only six companies to ramp up production of patient monitors, CTs and mobile X-ray devices, hospital beds, face masks, oxygen blenders, resuscitation devices, and other respiratory medical equipment, many of which were already in the process of doing so.[37] In short, the federal government response was wholly inadequate.

C. Volunteer Efforts

Shortages continued long after the DPA was invoked. By March 25, 2020, a lack of access to PPE persisted nationwide in hospitals large and small.[38] This problem was only exacerbated in cash-strapped rural states suffering from shortages well into April 2020.[39]

In response, volunteers stepped in to help with the manufacturing of medical supplies. Volunteer efforts manifested in sizeable numbers in unique ways, from individuals and companies making masks, to pilots helping with delivery and distribution.[40] For example, a family-owned manufacturer of car

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[36] Ben Gittleson, *Defense Production Act Could Help Amid Coronavirus, Even as President Trump Resists: Experts* (Mar. 25, 2020), https://preprod.abcnews.go.com/Politics/defense-production-act-amid-coronavirus-president-trump-resists/story?id=69789412.

[37] Yelena Dzhanova, *Trump Compelled These Companies to Make Critical Supplies, but Most of Them Were Already Doing It*, CNBC (Apr. 4, 2020, 12:12 PM, https://www.cnbc.com/2020/04/03/coronavirus-trump-used-defense-production-act-on-these-companies-so-far.html.

[38] Rachel Chason, *Coronavirus Leads Hospitals, Volunteers to Crowdsource*, WASH. POST (Mar. 24, 2020), https://www.washingtonpost.com/local/social-issues/donate-ppe-hospitals-gloves-masks-doctors-nurses/2020/03/23/d781e4cc-6d00-11ea-aa80-c2470c6b2034_story.html.

[39] *See, e.g.,* Anastasiya Bolton, *Rural Texas Hospitals 'Desperate' for Medical Supplies Needed to Fight Coronavirus* KHOU*11 (Apr. 6, 2020, 10:22 PM), https://www.khou.com/article/news/health/coronavirus/rural-hospitals-desperate-for-coronavirus-medical-supplies/285-a8438a49-c178-43b0-95f5-1f3c4583be85; Emily Paulin, *COVID-19 Deaths in Nursing Homes Plummet, Staff and PPE Shortages Persist*, AARP website (Mar. 11, 2021), https://www.aarp.org/caregiving/health/info-2021/nursing-home-covid-deaths-down-shortages-continue.html.

[40] Emma Platoff, *In West Texas, Volunteers Manufacture Medical Supplies and Amateur Pilots Deliver to Remote Hospitals*, THE TEXAS TRIBUNE (Apr. 20, 2020), https://www.texastribune.org/2020/04/30/west-texas-volunteer-pilots-deliver-medical-supplies-hospitals/.

parts voluntarily re-configured their machinery to produce highly needed pistons.[41] High-end New York City fashion designers felt the call to duty, and collaborated with the New York state government to produce between 500 to 1,000 face masks in a week; others committed to producing cloth face mask covers, lengthening the time a N95 respirator could safely be used.[42] In Georgia, the Atlanta Opera entered an agreement with Grady Hospital to make cloth respirator covers.[43]

The 3D printing community—i.e., those heavily engaged in the use of three-dimensional printers as either hobby or profession—also stepped up. Teachers and students at a private day school in Washington DC used 3D printers to produce face shields using open-sourced plans and by April, the students produced 3,000 face shields.[44] From Louisiana to Montana, 3D hobbyist families are creating production lines in their own homes using their 3D printers.[45] Similar stories abound in other cities such as Chicago,[46] and in some states, public universities are encouraging lay people to produce PPE for health care providers.[47]

Nonprofits also began operating as quasi-distributors. Based out of New York City, Project N95 was formed before the President invoked the DPA, and was quickly able to serve as a switchboard for makers and health care

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[41] Kenny Malone & Karen Duffin, *Planet Money: The Parable Of The Piston*, N.P.R. (Apr. 2, 2020), https://www.npr.org/2020/04/02/825800514/planet-money-the-parable-of-the-piston.

[42] Emilia Petrarca & Sarah Spellings, *Fashion Designers Are Pivoting to Face Masks*, N.Y. MAGAZINE (Mar. 23, 2020).

[43] Meredith Hobbs, *Troutman, Smith Gambrell Protect Volunteer PPE-Makers From Legal Liability*, LAW.COM (Apr. 7, 2020), https://www.law.com/dailyreportonline/2020/04/07/troutman-smith-gambrell-protect-volunteer-ppe-makers-from-legal-liability/.

[44] Ashraf Khalil, *DC's High School 'Makers' Fire Up 3D Printers to Create PPE, NBC* (Apr. 23, 2020), https://www.nbcwashington.com/news/local/dcs-high-school-makers-fire-up-3d-printers-to-create-ppe/2282731/.

[45] Devin Dwyer & Jacqueline Yoo, Making 'PPE' at Home: Families Use 3D Printers to Address Coronavirus Shortages, ABC NEWS (Apr. 9, 2020, 3:08 AM), https://abcnews.go.com/Politics/making-ppe-home-families-3d-printers-address-coronavirus/story?id=69995774.

[46] POLSKY CTR. FOR ENTREPRENEURSHIP & INNOVATION, *Maker Community Comes Together to 3D Print Personal Protective Equipment* (May 12, 2020), website available at https://polsky.uchicago.edu/2020/05/12/maker-community-comes-together-to-3d-print-personal-protective-equipment/.

[47] U. OF MARYLAND HEALTH SCIENCES & HUMAN SERVICES LIBR., *Making Personal Protective Equipment (PPE) for Health Care Workers: Home - Resources for Baltimore, Maryland and beyond during the Covid-19 pandemic* (Jul. 2, 2020), https://guides.hshsl.umaryland.edu/ppe.

providers in scores of cities all across the US.[48] These efforts spread nationally, such as #Findthemasks[49], and #getusppe (run by medical workers)[50], and in rural states as well,[51] where rural hospitals already daunted by budget crises have been particularly vulnerable to cost increases of crucial PPE.[52]

III. THE NEED FOR IP EXCEPTIONS DURING CRISIS

While the legal issues relating to crisis production are varied, this Article focuses on the issues relating to intellectual property, and though the discussion explores the burden on micro-manufacturers, the threat of liability extends also to distributors, distribution facilitators, and those who circulate patented plans and copyrighted ideas.[53] Consistent with this author's community economic development clinical practice, the discussion pays special attention to nonprofit organizations, small businesses, and individuals, or those netting little-to-no profit. However, much of the analysis is also applicable more widely to all companies outside the medical equipment industry with the capacity to produce PPE. For both categories of actors, the potential defendants are chilled from using their resources to do good given the various forms of liability incurred. I therefore advocate for laws that provide exceptions to IP infringement for purposes of crisis

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[48] TJ McCue, *Project N95 Launches To Battle 2020 Shortage Of N95 Masks During Coronavirus Outbreak*, FORBES (Mar. 22, 2020), https://www.forbes.com/sites/tjmccue/2020/03/22/project-n95-launches-to-battle-2020-shortage-of-n95-masks-during-coronavirus-outbreak/.

[49] Find the Masks website available at https://www.findthemasks.com/.

[50] Get Us PPE website available at https://getusppe.org/.

[51] Arkansas Regional Innovation Hub website available at https://arhub.org/arkansas-maker-task-force/.

[52] Lauren Weber, *Coronavirus Threatens Rural Hospitals Already At The Financial Brink* KASU1-4 (Mar. 21, 2020, 5:00 A.M. CDT), https://www.kasu.org/post/coronavirus-threatens-rural-hospitals-already-financial-brink#stream/0.

[53] "Indirect infringement (i.e., inducement) may occur if an individual knowingly causes another person to 3D print a patented device. Indirect infringement (i.e., contributory infringement) may also occur if an individual knowingly sells an essential "component" of a patented device to another person who then 3D prints the device." Seila Mortazavi & Zaed M. Billah, *Are There Patent Infringement Implications of 3D Printing PPE to Help Health Care Workers in the War Against COVID-19? Yes.,* HUNTON ANDREWS KURTH 1, (Apr. 2, 2020), https://www.huntonak.com/en/insights/are-there-patent-infringement-implications-of-3d-printing-ppe-to-help-health-care-workers-in-the-war-against-covid-19-yes-web.html.

production.

A. Intellectual Property As A Moral Right

In his article, *Faith-Based Intellectual Property*, Mark Lemley first discusses the origins of intellectual property jurisprudence as one based on a utilitarian idea that intellectual property protections incentivize creativity.[54] He then documents the growing body of evidence reflecting that in fact, in most industries, intellectual property does not drive creativity, and in some cases hinders it.[55] Notably, evidence reflects that most patent litigation is brought against the creators themselves, rather than against copyists.[56]

Even with this growing body of evidence, academics have continued to defend IP jurisprudence by arguing that "social utility alone is not reason enough to override [IP protections]."[57] Lemley derides this argument of intellectual property as a "moral right" in and of itself,[58] and likens it to an illogical, "faith-based" belief:

> Because that is a belief, evidence cannot shake it any more than I can persuade someone who believes in the literal truth of the bible that his god didn't create the world in seven days. Sure, there may be geological and archeological evidence that makes the seven-day story implausible. But faith is not just ambivalent about evidentiary support; it is remarkably resistant to evidentiary challenge…Now, you can think what you like about religion. I know lots of people who find value in it. But IP strikes me as an odd thing to make the basis of one's faith…[59]

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[54] Mark Lemley, *Faith-Based Intellectual Property,* 62 UCLA L. REV. 1328 (2015), 1331, 1335.

[55] *Id*. at 1334, footnote 20. (Citing, amongst others, Teresa Amabile, CREATIVITY IN CONTEXT 33 (1996); Mihaly Csikszentmihalyi, CREATIVITY 107–08 (1996); Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1777 (2012); Beth A. Hennessey & Teresa M. Amabile, *Reward, Intrinsic Motivation, and Creativity*, 53 AM PSYCHOLOGIST 674 (1998); William Hubbard, *Inventing Norms*, 44 Conn. L. Rev. 369 (2011); John Quiggin & Dan Hunter, *Money Ruins Everything*, 30 HASTINGS COMM. & ENT. L.J. 203, 214-15 (2008).

[56] Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1423 (2009).

[57] Lemley*, supra* note 54 at 1337 (*citing* Merges, JUSTIFYING INTELLECTUAL PROPERTY 3 (2011)).

[58] *Id*. at 1336-37. (Discussing the work of Robert Berges at University of California at Berkeley, Richard Spinello and Maria Bottis, and multiple other intellectual property scholars.).

[59] *Id*. at 1338.

Indeed, the hesitation of much of the legal community to impinge on intellectual property rights is stalwart, even against the backdrop of public health emergencies. For example, tensions between global health and intellectual property have arisen in the past, during the anthrax scare after the 9/11 tragedy, and more recently, when a lab company brought a patent lawsuit against a COVID-19 testing firm.[60] Against this legal backdrop, well-meaning individuals and companies are trying to address an immediate PPE shortage for the public good; often on a volunteer, no-cost, or at-cost basis.

B. Patent Issues

In patent law, the potential for infringement by volunteers is rampant. While makers may be operating in good faith when they use plans and blueprints obtained from open-source websites, it is unlikely that volunteers operating in a crisis scenario have performed the extensive due diligence research needed to ensure that their design does not constitute patent infringement. A plan obtained from an open-source website can, in fact, infringe a patent. Liability could implicate not only the individual who proffered the design/invention as his or her own, but also the producer of the manufactured items; some might argue that liability could attach to the distributor or those who facilitate distribution. Without adequate clearance searching of the open-sourced plan against the USPTO's database of registered patents—which can cost hundreds or thousands of dollars and take weeks or months to complete thoroughly—there is no dispositive answer as to whether a use of plan or reproduction of an invention is an infringement of an existing patent.

Through the PREP Act of 2005, Congress created certain liability shields to facilitate production of PPE and related equipment, but not for the individuals, small businesses, and nonprofits from the aforementioned case studies.[61] Rather, PREP protections were intended to protect large-scale professional manufacturers and end users (such as hospitals) in the industry

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[60] Christopher Morten & Charles Duan, *The tension between public health and patents in the era of Covid-19*, STAT (Apr. 14, 2020), https://www.statnews.com/2020/04/14/patents-public-health-tension-covid-19/.

[61] Families First Coronavirus Response Act, H.R. Res 6201, 116th Congress (2019-202). (Liability protection limited to § 6005. This section extends targeted liability protection to certain manufacturers, distributors, prescribers, and users of approved respiratory protective devices that are (1) subject to specified emergency use authorizations; and (2) used during the period beginning on January 27, 2020, and ending on October 1, 2024. Emergency use authorizations allow for the use of unapproved drugs, biological products, or devices, or for the unapproved use of such products, to respond to a declared emergency.

who already were undergoing an FDA approval process or complying with FDA regulations in many other related areas.[62]

The PREP Act of 2005[63] provides immunity from liability for events arising from the "administration or use of countermeasures to diseases, threats and conditions determined by the Secretary to constitute a present, or credible risk of a future public health emergency to entities and individuals involved in the development, manufacture, testing, distribution, administration, and use of such countermeasures."[64] It requires the Secretary of the Department of Health and Human Services to make a declaration specifically under the Act, which was made and incorporated into the CARES Act to address COVID-19.[65] The protection is limited to (1) "covered persons" (2) engaging in "recommended activities" (3) for "covered countermeasures." A covered person is defined as a manufacturer of a countermeasure, a distributor, program planner of a countermeasure; a qualified person who prescribed, administered, or dispensed a countermeasure; or an official, agent or employee of a manufacturer, distributor, program planner or qualified person.[66] This language has been interpreted to mean those operating at a commercial level, such as a corporate manufacturer or common carrier, [67] and some have interpreted this liability protection to extend to intellectual property claims, such as patent infringement.[68]

The extent to which our case study of volunteers are "covered persons" under the Act is unclear and underscores the inadequacy of the PREP Act in providing clear guidance to good Samaritan micro-manufacturers. Rather, the

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[62] *Id.*

[63] Joshua D. Sarnoff, *COVID-19 Highlights Need for Rights to Repair and Produce in Emergencies*, HARVARD LAW PETRIE FLOM CENTER (May 19, 2020), https://blog.petrieflom.law.harvard.edu/2020/05/19/covid19-intellectual-property-patent-law/.

[64] U.S. Dep't pf Health & Human Services, *Public Health Emergency*, *available at* https://www.phe.gov/Preparedness/legal/prepact/Pages/default.aspx.

[65] *Id*.

[66] U.S. Dep't of Health and Human Services, *PREP Act Q&A's, Immunity, 2. Who May be Afforded Immunity from Liability under a PREP Act Declaration? available at* https://www.phe.gov/Preparedness/legal/prepact/Pages/prepqa.aspx#immune2.

[67] U.S. Dep't of Health and Human Services, *PREP Act Glossary of Terms* ("distributor", and "manufacturer" *available at* https://www.phe.gov/Preparedness/legal/prepact/Pages/prep-glossary.aspx#manufacturer; Pillsbury Law *Covered Persons Table*, https://www.pillsburylaw.com/images/content/1/3/130913/Covered-Person-Table.pdf.

[68] *See* Morten, *supra* note 60.

PREP Act provides only after-the-fact relief that requires judicial interpretation of vaguely-defined protections for vaguely-defined parties.

1. Existing And Proposed Statutes Requiring Actions From The Federal Government

Either through legislation, or declarations issued by the White House or Congress, the federal government has an ability to offer relief to Good Samaritan PPE providers in a variety of ways.

a. Facilitating innovation to fight coronavirus bill

The scenarios involving lay micro-manufacturers were likely contemplated and under discussion by Congress when they created the CARES Act, though nowhere in the Act is this issue addressed. The most noted feature of the CARES Act was the $3 trillion package, a significant portion of which was dedicated to impacted businesses and unemployed individuals.[69] Some of this financial assistance included support to rural hospitals and for improvements to internet infrastructure in rural areas.[70] The CARES Act was passed unanimously by the Senate on March 25, 2020 and signed into law on March 27, 2020.[71]

Shortly thereafter, on April 13, 2020, Senator Bill Sasse of Nebraska introduced a bill to address the issues faced by Good Samaritan PPE producers called the "Facilitating Innovation to Fight Coronavirus Act" which has yet to be passed.[72] The bill provides immunity for healthcare providers working outside their specialties or modifying FDA-approved devices for non-approved uses and conducting testing outside of certified healthcare facilities. In tandem with these allowances, it also proposes to suspend patent rights of inventions used to fight the coronavirus pandemic during the time period in which there is a National Emergency declaration by the President. As compensation to IP owners, the bill also proposes to extend the period of the invention's patent for ten additional years, once the national emergency status is terminated.

As of the writing of this Article, the bill suffers from numerous fundamental shortcomings and faces much criticism. In its brevity (three pages), it fails to outline whether it would apply to existing patents or only those created during the period of coronavirus, and also does not adequately

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[69] Pub.L. 116–136, H.R. 748.

[70] *Id.*

[71] *Id.*

[72] Facilitating Innovation to Fight Coronavirus Act, 116th Cong. S. 3 (March 30, 2020).

define its terms, specifically the definition of what is "used or intended for use in the treatment of…COVID-19.[73] Others argue that the bill stifles innovation by disincentivizing costly experimentation removing the ability to recoup expenses until after the pandemic ends, at which time its inventions would no longer be in demand.[74] Other arguments decry that such loss of rights would result in the stripping from the patent-holder the ability to oversee quality control by the would-be infringer who could then produce dangerous or inferior products, or could price gouge.[75] Arguably, potential gouging could be prohibited by invoking certain provisions of the Defense Production Act.[76]

Further, there is the question of proportionality; frequently, the patent-holder of an invention worthy of mass reproduction is a large, well-funded company and less often is it an individual inventor. Ostensibly, the state of emergency will subside with the introduction multiple vaccines that can be distributed widely and affordably. As of August 2021, 112 different vaccines are in clinical development, 183 in pre-clinical development,[77] and three are currently available for use in the United States.[78] As of December 2021, Baylor College of Medicine and Texas Children's Hospital developed a version for distribution at low-cost in India.[79] However, as with many

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[73] Courtenay C. Brinckerhoff, *Proposed Legislation To Delay, Then Extend Coronavirus Patents*, THE NAT'L L. REV. (Apr. 13, 2020), https://www.natlawreview.com/article/proposed-legislation-to-delay-then-extend-coronavirus-patents.

[74] James Edwards & Gene Quinn*, Facilitating Innovation to Fight Coronavirus Act— Legislation That's a Mixed Bag*, IPWATCHDOG.COM, (Apr. 8, 2020), https://www.ipwatchdog.com/2020/04/08/facilitating-innovation-to-fight-coronavirus-act-legislation-mixed-bag/id=120483/.

[75] *Id*.

[76] Barren Avery, Brian Johnson & Orga Cadet, *Impact of the President's Invocation of the Defense Production Act on Federal Contractors*, BAKER HOSTETLER, (Mar. 19, 2020), https://www.bakerlaw.com/alerts/impact-of-the-presidents-invocation-of-the-defense-production-act-on-federal-contractors.

[77] World Health Organization, *COVID-19 Vaccine Tracker, available at,* https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines .

[78] U.S. Food and Drug Administration, *COVID-19 Vaccines*, EMERGENCY PREPAREDNESS & RESPONSE: CORONAVIRUS DISEASE 2019 (COVID-19), https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines.

[79] Texas Children's Hospital and Baylor College of Medicine COVID-19 Vaccine Technology Secures Emergency Use Authorization in India, *available at*, https://www.texaschildrens.org/texas-children%E2%80%99s-hospital-and-baylor-college-medicine-covid-19-vaccine-technology-secures-emergency.

diseases—vaccines, PPE, and other COVID-19-related treatment items will have marketability long after a pandemic.

b. Compulsory licenses and the TRIPS agreement

Various nations around the world have proposed the establishment of compulsory licenses in the context of the inventions needed to combat COVID-19. In a compulsory license, one is authorized to copy, make, use or sell the intellectual property without the permission of the owner.[80] A compulsory license could establish a fixed licensing fee for the use or reproduction of a qualifying patented (or copyrighted) creation, and such license would be mandatory. Costa Rica, Chile, Colombia, Peru, Malaysia, the Netherlands and Israel are amongst the cohort of nations that either have already adopted compulsory licensing for inventions related to the virus, or are taking such a policy under consideration.[81]

Under the Trade-Related Intellectual Property Agreement (TRIPS Agreement), signed by all members of the World Trade Organization including the United States, federal governments of member nations can create compulsory licenses and utilize a patented work from any member nation without the authorization of the patent-holder.[82] It is a threshold agreement in which member nations can provide more but not less protection for the individual patent-holder. It creates exceptions to patent protection so long as the patent-holder is not unreasonably affected or prevented from exploiting the patent herself, and explicitly creates the right to establish compulsory licensing.[83] Most European countries have opted into a compulsory licensing policy of some sort,[84] and under a 2006 EU agreement, most EU countries must allow for compulsory licensing to the least developed and developing countries.[85] Even under these agreements,

[80] Glossary, World Trade Organization, https://www.wto.org/english/thewto_e/glossary_e/glossary_e.htm

[81] Elaine Ruth Fletcher & Svět Lustig Vijay, *Costa Rica Urges WHO To Lead Global Initiative For Pooled Rights To COVID-19 Diagnostics, Drugs & Vaccines*, HEALTH POLICY WATCH (Mar. 3, 2020), https://www.healthpolicy-watch.org/costa-rica-urges-who-to-lead-global-initiative-for-pooled-rights-to-covid-19-diagnostics-drugs-vaccines/.

[82] TRIPS Agreement, https://www.wto.org/english/docs_e/legal_e/31bis_trips_02_e.htm.

[83] *Id.*

[84] European Patent Academy, *Compulsory licensing in Europe A country-by-country overview*, EUROPEAN PATENT OFFICE (2018), http://documents.epo.org/projects/babylon/eponot.nsf/0/8509F913B768D063C1258382004FC677/$File/compulsory_licensing_in_europe_en.pdf.

[85] Council Regulation 816/2006, 2006 O.J. (L. 157) 1, 7 (EC).

however, a country must first try to obtain permission of the patent-holder, except for in extreme circumstances such as a pandemic. The compulsory license may only last for the duration of the emergency, and the amount of the licensing fee is open to litigation. Compulsory licensing is also available in copyright, which does not require emergency circumstances and may be in place indefinitely.[86]

In the U.S., compulsory licensing is most commonly used in non-dramatic music; musicians may cover the original composition of another for a fixed statutory fee per reproduction.[87] So long as the melody of the original composition is preserved, the copyright holder may not object or litigate the amount.[88] Also in the US, compulsory licensing is also used in public broadcasting,[89] retransmission by cable systems,[90] subscription digital audio transmission,[91] and non-subscription digital audio transmission such as internet radio.[92]

In patent law, however, the U.S. has not enacted laws to enable compulsory licensing in the same fashion as has Europe.[93] U.S. compulsory licensing of patents exist for plant variety protection to secure fiber, food, and feed supply;[94] all patents for use by the U.S. government itself;[95] or where the U.S. has funded the research and development at least in part.[96] The latter authority, termed "march-in" rights, has never been used and is more thoroughly discussed in the next section.

Recently, President Joe Biden made a historic move in expressing support to waive coronavirus vaccine patents.[97] In doing so, he surprised

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[86] WIPO Guide on the Licensing of Copyright and Related Rights, World Intellectual Property Organization, 2004. p. 101. ISBN 978-92-805-1271-7.

[87] *See generally* 17 U.S.C. § 115.

[88] Coe Ramsey & Brooke Pierce, *Music Law 101: Common Music Licenses*, JDSupra, (July 17, 2019), https://www.jdsupra.com/legalnews/music-law-101-common-music-licenses-81898/.

[89] 17 U.S.C. 118.

[90] 17 U.S.C. 111(c).

[91] 17 U.S.C. 114(d)(2).

[92] 17 U.S.C. 114(d)(1).

[93] Nafsika Karavida & Dara Onofrio & Deena Merlen, *Patent Rights and Wrongs in the COVID-19 Pandemic: EU and U.S. Approaches to Compulsory Licensing*, IPWATCHDOG (May 19, 2020), https://www.ipwatchdog.com/2020/05/19/patent-rights-wrongs-covid-19-pandemic-eu-u-s-approaches-compulsory-licensing/id=121709/.

[94] 7 U.S.C. § 2404 (2000).

[95] *See generally* 28 U.S.C. § 1498.

[96] 35 U.S.C. § 203.

[97] Amy Maxmen, *In shock move, U.S. backs waiving patents on COVID vaccines*, NATURE: NEWS (May 6, 2021), https://www.nature.com/articles/d41586-

congressmembers from both sides of the political spectrum, "mark[ing] a shift in policy in a major, pro-public health way," according to health law scholar Matthew Kavenaugh of Georgetown University.[98] However, even with the best of intentions by President Biden, a patent waiver under the TRIPS Agreement would not be triggered until all members of the World Trade Organization agree to a waiver and related terms.[99] And, even should all nations agree to a patent waiver (and indications exist that not all EU nations would do so), this would only comprise step one of a three step process, the latter of which are incredibly time and resource intensive.[100] The second and third steps, knowledge transference followed by large scale investment in manufacturing infrastructure, are equally necessary[101] and may not occur quickly enough to effectively address the ever-mystifying coronavirus and its quickly growing number of variants.

Prior to President Biden's expression of public support of a coronavirus vaccine patent waiver, there is just one other documented case of potential patent waiving, in which Tommy Thompson, the Secretary of the Department of Health and Human Services threatened to "break" the patent for Cipro, held by German-based company Bayer, in order to stockpile supplies to treat anthrax during a 2001 nationwide scare.[102] The legal structure through which Secretary Thompson intended to use is unclear, given that Bayer backed down before litigation occurred and sold the needed supplies at the government's requested price. Generally, however, the U.S. has held firm on its position of upholding patent rights in the pharmaceutical industry, even when concerning life-saving drugs needed to treat HIV/AIDS or malaria in multiple countries in Africa,[103] and it is unclear whether President Biden's support in waiving a vaccine patent will be meaningful should even one member of the World Trade Organization hold oppose.

The U.S. (and Western World's) predilection against compulsory licensing in medical supplies not only prejudices good Samaritans diligently seeking to address supply shortages, but also greatly prejudices the U.S. as

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021-01224-3#author-0.

[98] *Id.*

[99] *Id.*

[100] *Id.*

[101] "'It's a one-two-three,' explains Rachel Cohen, U.S. director for the non-profit Drugs and Neglected Diseases initiative in New York City. 'First we need to remove patent obstacles, second we need to transfer the knowledge on how to make them, and step three is a massive investment in manufacturing capacity,' " *Id.*

[102] Jill Carroll & Ron Winslow, *Bayer to Slash by Nearly Half Price U.S. Pays for Anthrax Drug,* WALL ST. J. (Oct. 25, 2001), https://www.wsj.com/articles/SB1003966074330899280.

[103] *Id.*

successful vaccines are developed elsewhere, if the production of multiple vaccines is required to vaccinate the entire U.S. population, as well as those needing to enter the US, as quickly as possible. Many argue that the assumption that compulsory licenses only grossly prejudices investors is a false one,[104] and that pro-market economic justifications for compulsory licenses do in fact exist.[105] However, the scope of this Article primarily focuses on non-pharmaceutical inventions and will not further address the arguments for and against compulsory licensing in the pharmaceutical context.

Rather, a distinction could be made in the inventions discussed in the case study (ventilator parts, and PPE such as masks, gowns, respirators) and high costs items such as pharmaceuticals. We might look to the distinction between granting compulsory licenses in copyright versus pharmaceutical patents; that difference may be driven by the disparity in cost of research and development for a drug greatly exceeding the costs needed to develop a song, for instance. Thus, it may be that the government is more willing to require compulsory licensing in one context over the other. However, given the broad spectrum of medical equipment in which there are shortages, perhaps the U.S. might consider revisiting this legal tool as applied to equipment with lower research and development costs, and leave the rarely used march-in rights device as the measure for items with higher start-up costs.

c. March-in rights under the Bayh-Doyle Act

The Bayh-Dole Act is considered one of the most definitive pieces of legislation in the U.S. patent and innovation law. Its centerpiece features 1) enabled inventors of federally funded inventions to maintain ownership of intellectual property rights for purposes of commercialization, and 2) enabled the government to grant exclusive licenses to any intellectual property it owns. As part of a balancing feature of this pro-market legislation, the Bayh-Dole Act also reserved for the federal government certain march-in rights,[106] allowing the federal government to override the intellectual property rights of the patent holder under certain circumstances, including any time it deems it "necessary to alleviate health or safety needs."[107] This enables the

[104] Jerome H. Reichman, *Compulsory licensing of patented pharmaceutical inventions: evaluating the options*, J LAW MED ETHICS (2009 Summer) 37(2): 247–263, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2893582/

[105] Sean Flynn, Aidan Hollis & Mike Palmedo, *An Economic Justification for Open Access to Essential Medicine Patents in Developing Countries,* J. OF L. MEDICINE & ETHICS (2009), https://pubmed.ncbi.nlm.nih.gov/19493066/.

[106] 35 U.S. C. § 203(a) (2021).

[107] *Id.*

government to manufacture the invention itself, or direct a private sector company to do so; in return, certain types of patent holders (e.g., nonprofits or individuals) may sue the government for "reasonable and entire compensation for such use and manufacture", including the cost of litigation to collect such.[108] Past precedent indicates that reasonable royalties would include at least 10% of sales, and a compensation plan that could include the cost of development adjusted for risk and other factors.[109] The legislative intent appears to contemplate situations in which the patent-holder fails to move forward on a patent against the public's best interests.

The drawbacks from this approach are two-fold: 1) the protection is limited only to those patents in which the research and development was funded by a federal agency; and 2) this requires a proactive government that has the wherewithal not only to confront the private sector but also to undertake production and commercialization. Given how previous presidential administrations have been hesitant in using their clear-cut authority under the DPA to compel the private sector into manufacturing sufficient PPE other than for a handful of necessary pieces of medical equipment, it is unwise to rely exclusively on the wisdom of the office of the President to engage its power to use its march-in rights. It is worthy to note that the Trump administration was not alone in its hesitation; never before in the history of the U.S. have march-in rights been used.

2. Non-Government Solutions: Solutions Requiring Legal Expertise, High Costs & Sufficient Time

Others have pointed to potential solutions that require actions by either the patent holders, the would-be patent infringers, or both. These potential solutions do not rely on federal or state governments to compel action from private patent-holders or confer liability protection through a statute.

a. Due diligence procedures

Some practitioners have recommended that good Samaritan PPE producers adopt a three-part process before engaging in the potentially infringing activity. The process includes 1) obtaining an IP clearance, 2) researching the IP asserted, and 3) requiring requesting party to supply all

[108] 28 U.S.C. § 1498(a) (2021).

[109] Michael Liu, William Feldman, Jerry Avorn & Aaron Kesselheim, *March-In Rights And Compulsory Licensing—Safety Nets For Access To A COVID-19 Vaccine*, HEALTH AFFAIRS BLOG (May 6, 2020), https://www.healthaffairs.org/do/10.1377/hblog20200501.798711/full/.

info it possesses about relevant IP and infringement risks.[110]

b. Creative licensing and patent pooling

These same practice experts have also suggested a contractual method to avoid patent infringement. For instance, they suggest that the Good Samaritan PPE producer negotiate a creative licensing arrangement with the patent-holder allowing him to produce a limited supply under defined circumstances for a minimal fee.[111] Others have suggested negotiating for a patent pooling arrangement, in which a set of patent holders issue a pooled license that results in licensing fees that become more affordable for the Good Samaritan PPE producers as an economy of scale is reached.[112]

c. Contractual devices

Practitioners have also suggested relying on legal language in agreements and notifications. For instance, the Good Samaritan PPE producer could draft indemnification language in a supply contract when asked to produce PPE. [113] She should also insert statements making clear that no representations or warranties of intellectual property ownership is being made by reproduction of such items.[114] The good Samaritan PPE producers could also require the requesting party to purchase insurance against IP infringement or obtain it on its own.

All of the devices described in this section, however, require the time and expertise of a patent attorney, (and the recognition for the need for one first and foremost) which the Good Samaritan PPE producers in the case study will not likely be able to afford. Even if the financial resources were present, the time needed to negotiate a sophisticated pooled patent arrangement or to

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[110] John Cotter, Patrick McElhinny, Christopher Verdini & Christopher Warner, *COVID-19: IP Strategies for Universities and Nonprofits During the Pandemic – Mitigating Patent Infringement Risks When Making PPE and Other Health-Related Supplies*, NAT'L L. REV (Apr. 23, 2020).

[111] Michael Horikawa, *As a Response to COVID-19, 3D Printing Provides Some Wins … and Some Compelling Intellectual Property Questions, JDSUPRA* (Mar. 25, 2020), https://www.jdsupra.com/legalnews/as-a-response-to-covid-19-3d-printing-52289/.

[112]Michael Horikawa, *As a Response to COVID-19, 3D Printing Provides Some Wins … and Some Compelling Intellectual Property Questions, JDSUPRA* (Mar. 25, 2020), https://www.jdsupra.com/legalnews/as-a-response-to-covid-19-3d-printing-52289/.

[113] *Id.*

[114] *Id.*

undergo a due diligence process can be extremely time intensive and unrealistic in a pandemic environment.

3. Potential New, Common Law Doctrines As Relief

Given the inertia of the federal government to use its authority, and the level of legal sophistication and resources required of good Samaritan PPE producers to adopt due diligence review or negotiated solutions, perhaps the more realistic option would be the development of protective legal doctrines.

a. Right to repair and produce extended to pandemic

The right to repair and produce doctrine enables purchasers of inventions to repair the physical property purchased, using un-patented parts, and without requiring the permission of the patent-holder. This "exhaustion doctrine", has been upheld by the U.S. Supreme Court.[115] However, case law left open the possibility that liability might still exist in the case of patented medical devices, (e.g., ventilator parts); nor has the Court addressed the possibility that such parts are not available in sufficient supply during a life-threatening pandemic, or might only be available at exorbitant prices. While this may not cover the full spectrum of PPE, a revised version of this doctrine certainly could be relevant to the reproduction of ventilator parts, and other components of critical machinery.

b. March-in rights by proxy

The current conditions suggest a need for a doctrine which allows others to engage in roles traditionally filled by the government to address shortages of PPE and other critical supplies. These are issues often characterized as ones of national security and there is clear, statutory, Congressional authorization for the government, specifically, the President and federal agencies on his behalf, to act. The fact that the President and the President's administrative directors choose not to do so does not take away the identified need and the administrative authority to do so.

Where government agencies and the President fail to act or, for whatever reason, are unable to act in a way that sufficiently addresses these national security issues, the courts should explore the concept of march-in-rights by proxy to protect, and even incentivize organizations and individual actors to act in a way that serves the public. These entities, whether they are nonprofit

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[115] Impression Prods., Inc. v. Lexmark Int'l, Inc., 137 S. Ct. 1523, 1529 (2017).

organizations, individuals, or for-profit businesses should be allowed to undertake at least some of the activities authorized by the Bayh-Dole Act as part of the march-in rights on patents that were developed with federal funding. Specifically, these actors should be authorized a license to use the patent where there is a finding that the patent-holder has not exploited these rights in a manner that threatens national security. The patent-holder should be paid a reasonable amount for exploitation that includes reimbursement of research and development, and possibly ten percent of any proceeds after production costs of the infringer are covered, just as they would be entitled to had the federal government been the one to execute its march-in rights. In essence, the relief given to the patent-holder would mirror any relief possible under the Bayh-Dole march-in rights, and the good Samaritan infringers would be able to act without being punished for their good deeds.

The creation of march-in rights by proxy dovetails off of the concept that third parties should be able to utilize intellectual property where there is a necessity, and where the IP owner has not sufficiently commercialized the invention on a scale needed to address an emergent public need. March-in rights by proxy would not disincentivize inventions because the patent holders would still recover a portion of fees and reimbursement for research and development if such profits are made, and this would only occur where such R&D expenses were at least partially funded by the federal government.

c. DPA by proxy

Should the courts adopt a doctrine of march-in rights by proxy, a gap in protection remains where the would-be infringer exploits a patent that did not in fact receive funding from a federal agency. For those instances, the doctrine of DPA by Proxy could be a viable solution. Under this theory, a third party could break the patent and compel a compulsory license under the same circumstances outlined in the DPA for the government: the would-be infringer must make a due diligent effort to contact the patent-holder except in extreme circumstances such as a pandemic; the license may only last for the duration of the emergency, the would-be infringer cannot interfere with the patent-holder's use and commercialization of the patent, and the amount licensing fee can include a percentage of profits and reimbursement of R&D costs if the would-be infringer sells for an amount in excess of production costs. The would-be infringers would be required to comply with all other relevant aspects of the DPA such as the prohibition against hoarding and gouging.[116]

[116] "…to prevent hoarding, no person shall accumulate (1) in excess of the reasonable demands of business, personal, or home consumption, or (2) for the purpose of resale at prices in excess of prevailing market prices." 50 U.S.C. § 4512.

Under DPA by Proxy, a balance between the interests of the patent-holder and the good Samaritan would-be infringer are met: the good Samaritan is not penalized for acting on behalf of an immediate public interest unmet by the government or the patent-holder, and the patent-holder is compensated for her expenses if there is any money to be made.

C. Copyright

In addition to patent, the need for free use of copyrighted materials is exacerbated during the pandemic.[117] This section will consider the potential for infringement of copyrighted works by those who must adapt to functioning in a time of crisis.

Consider some of the copyrighted items pledged as free IP during COVID-19, such as manuals, blueprints, datasets, and technical drawings. More specifically, some of the items pledged include an "[i]nstruction manual to construct a low cost, easy-to-use outdoor shelter for healthcare workers to conduct safer COVID-19 drive-up or walk-up testing;"[118] a technical drawing for a "Safe Supply" outdoor grocery store set up by Bow Market Somerville to provide a COVID-19 friendly layout, with a suggested operational structure using pre-scheduled time slots and one-way paths; a touchless ordering system[119]; and a "dataset of anonymized Bing queries relating to the COVID pandemic, useful for research on the spread and containment of the pandemic, public concerns and the information being disseminated about it" pledged by Microsoft.[120]

Beyond the response to the pandemic itself, the free use of copyrighted materials is likewise important in an educational environment radically altered by COVID-19. Libraries have had to close with faculty, staff and students coming to rely on virtual materials and modes of instruction. Professors have had multiple students who were displaced in the early weeks of the pandemic and who had to be sent digital copies of course texts with the physical copies now thousands of miles away. As classes have moved online,

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[117] *See*, e.g., Matthew Bultman, *Online Teaching During Pandemic Raises Copyright Concerns, Bloomberg Law*, BLOOMBERG LAW (Apr. 3, 2020), https://news.bloomberglaw.com/ip-law/online-teaching-amid-virus-raises-copyright-questions.

[118] *Sandia-Drive Up Booth for Safer COVID-19 Testing*, OPEN COVID PLEDGE, (May 20, 2020), https://opencovidpledge.org/2020/05/20/drive-up-booth-for-safer-covid-19-testing/.

[119] *Bow Market-Grocery Design*, OPEN COVID PLEDGE (May 20, 2020), https://opencovidpledge.org/2020/05/20/bow-market/.

[120] *Microsoft – Covid-19 Search Data*, OPEN COVID PLADGE (May, 29, 2020), https://opencovidpledge.org/2020/05/19/microsoft-bing/.

teachers tend to record students as a matter of policy, capturing copyrighted audiovisual material recordings—e.g., YouTube videos, music, photographs—along with the lectures.[121]

1. Flexible Licenses

Certain authors and publishers have extended permissions in the form of "flexible licenses" to utilize materials.[122] In terms of textbooks, some publishers, like Cengage and Cambridge University Press, have allowed college students free access to digital copies of textbooks. And Macmillan Children's Publishing Group and HarperCollins Children's Books, as well as author J.K. Rowling, have allowed teachers to post videos of themselves reading their books to children. While such permission is helpful in isolated instances, a clarification that emergency uses of copyrighted materials constitute fair use during a pandemic would provide responders, educators, and students with confidence that they are not breaking the law in adapting to radically altered demands. Perhaps copyright's fair use doctrine could be helpful in that regard.

2. Fair use

The common law-derived doctrine of fair use is currently copyright's only safety valve. In 1976, it was codified in the Copyright Act.[123] Fair use consists of four factors to consider in determining whether use of a copyrighted work is "fair" and thus not constituting copyright infringement. These factors are: (1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[124] Overall, fair use is intended to serve as a flexible mechanism designed to balance the interests of copyright holders with the interests of other creators and the public.[125]

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[121] Emily Hudson & Paul Wragg, Proposals for Copyright Law and Education During the Covid-19 Pandemic (June 3, 2020) (unpublished manuscript available at file:///C:/Users/dmarlan/Downloads/SSRN-id3617720.pdf.)

[122] Matthew Bultman, *Online Teaching During Pandemic Raises Copyright Concerns*, BLOOMBERG LAW (Apr. 3, 2020), https://news.bloomberglaw.com/ip-law/online-teaching-amid-virus-raises-copyright-questions.

[123] 37 C.F.R. 201.2(a)(3).

[124] Id.

[125] Kara Yorio, *A Crisis-as in School Closures Due to Coronavirus-Justifies Fair*

On March 13, 2020, a group of copyright specialists—college, university, and public librarians—released a public statement regarding "Fair Use & Emergency Remote Teaching & Research."[126] The Statement is "meant to provide clarity for U.S. colleges and universities about how copyright law applies to the many facets of remote teaching and research in the wake of the COVID-19 outbreak."[127] In evaluating the fair use factors, the Statement concludes that although no fair use decisions "squarely address[es] copying to help minimize a public health crisis, the other variety of public benefits cited by courts leads us to believe that this purpose would weigh extremely heavily in favor of fair use."[128]

The Statement then goes on to analyze the copying during a public health emergency under the four fair use factors. What follows is a summary of that analysis interspersed with our own thoughts on how fair use might apply.

Under the first factor—"the purpose and character of the use"—courts tend to "favor uses where the purpose is to benefit the public, even when that benefit is not 'direct or tangible.'"[129] This factor, considered "the heart of the fair use inquiry," tends to consider whether the use is "transformative in nature." Here, while the copyrighted works themselves may be substantially the same as the original version, the circumstance itself—a once in a century pandemic—can be found to be highly transformative.

As to the second factor—"the nature of the copyrighted work"—it is rarely considered in a fair use analysis.[130] However, in certain cases, works that provide a "substantial public benefit" lean toward a holding of fair use.[131] This would certainly seem applicable to works used in adapting during times of crisis.

Use, Say Librarians, SLJ (Mar. 14, 2020), https://www.slj.com/?detailStory=librarians-address-copyright-concerns-argue-fair-use-applies-amid-academic-closures-coronavirus-covid19.

[126] *Public Statement of Library Copyright Panelists: Fair Use & Remote Teaching & Research* (Mar. 13, 2020), https://docs.google.com/document/d/10baTITJbFRh7D6dHVVvfgiGP2zqaMvm0EHHZYf2cBRk/mobilebasic#ftnt6, (citing *Authors Guild v. Google, Inc*., 804 F.3d 202 (2d Cir. 2015); *Time Inc. v. Bernard Geis Assocs.*, 293 F. Supp. 130 (S.D.N.Y. 1968); *Online Policy Grp. v. Diebold, Inc*., 337 F. Supp. 2d 1195 (N.D. Cal. 2004).

[127] *Id*.

[128] *Id.*

[129] *Id*, citing Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510, 1523 (9th Cir. 1992), as amended (Jan. 6, 1993).

[130] *Id.*. *See* Paris Convention at art. 5A; G.H.C. Bodenhausen, *Guide to the Application of the Paris Convention for the Protection of Industrial Property, as Revised at Stockholm in 1968*, 1968, at 71, 80.

[131] *See*, e.g., A.V. ex rel. Vanderhye v. iParadigms, 562 F.3d 630 (4th Cir. 2009) (holding that a digital antiplagiarism service "provide[d] a substantial public benefit.

The third factor—"the amount and substantiality of the work"—encourages reasonableness. "A use can be fair," according to the Statement, "as long as it reproduces what is reasonable to serve the purpose." Copying the entirety of a work, or at least a substantial portion of it, in the educational context during COVID-19 appears to be reasonableness given the circumstances, in many cases.[132]

The fourth and final factor is "the effect of the use upon the potential market for the copyright work."[133] It "requires a balancing of the benefit the public will derive if the use is permitted" as compared to "the personal gain the copyright owner will receive if the use is denied."[134] According to the Statement:

> While in normal circumstances there may be licensing markets for some items, the spontaneity of a move to remote teaching under emergency circumstances reduces the importance of this factor. Checking for and relying on licensed alternatives bolsters the case for fair use under the fourth factor, but lack of time to check for licenses should not be a barrier to meeting the needs of our communities.[135]

The problem with fair use, though, is that, as Michael Carroll notes, its "context sensitivity renders it of little value to those who require reasonable ex ante certainty about the legal value of a proposed use."[136] We do not know if something, in other words, is a fair use prior to a legal determination, which only occurs once a legal proceeding is well under way. A law that declares emergency use of copyright materials in the context of a pandemic, analogous to the common law doctrines discussed in the next Part, would therefore be preferable to relying on individual fair use determinations in preventing the chilling of productive uses of copyrighted as well as patented materials. Thus, solutions beyond fair use appear to be warranted.

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[132] *See*, e.g., Authors Guild v. Google Inc., 770 F. Supp. 2d 666 (2d Cir. 2015) ('unchanged copying has repeatedly been found justified as fair use when the copying was reasonably appropriate to achieve the copier's transformative purpose and was done in such a manner that it did not offer a competing substitute for the original); Kelly v. Arriba Soft Corp., 336 F.3d 811 (9th Cir. 2003).

[133] *Id.*

[134] *Id.*

[135] *Public Statement of Library Copyright Panelists: Fair Use & Remote Teaching & Research* (Mar. 13, 2020), https://docs.google.com/document/d/10baTITJbFRh7D6dHVVvfgiGP2zqaMvm0EHHZYf2cBRk/mobilebasic#ftnt6.

[136] Michael W. Carroll, *Fixing Fair Use*, 85 N. CAR. L. REV. 1087 (2007).

D. Common Law Analogies For Proposed Legislation Permitting Emergency Uses

This subpart analogizes the common law in proposing a statutory emergency exemption to certain intellectual property liabilities in the face of the Covid-19 pandemic. In doing so, it looks to (1) Good Samaritan laws, (2) the public necessity defense to trespass, and (3) landlord-tenant law, in the context of eviction moratoriums during COVID-19. In each of these cases, emergencies provide defenses to violations of tort or property rights. In the case of IP's statutory regimes, though, no exemptions to infringement, either for patent or copyright, exist for crises despite incredible need.

The constitutional purpose of intellectual property—at least as to patent and copyright—is "to promote the Progress of Science and the useful Arts."[137] Guiding the Constitution's Intellectual Property clause is the longstanding premise that economic incentives are needed to encourage inventors and creators.[138] This proposal does not appeal to a moral claim, which is long out of favor in the utilitarian world of intellectual property. Instead, each of the following analogies is intended to show that during times of crisis, IP's *individual* economic incentives must sometimes yield to incentivize *collective* public interests. To the extent that IP can be likened to tangible property, these common law doctrines can be used as guidance in fashioning an emergency declaration regarding intellectual property liability in the wake of COVID-19.

1. Good Samaritan Laws

Good Samaritan laws—those protecting anyone who renders aid in an emergency to one who is sick or injured—provide the first area of analogy. Good Samaritan doctrines in the U.S. have long provided a defense against tort claims (most often negligence) arising from attempted rescue.[139] Though originally derived from the common law, Good Samaritan laws have, since

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[137] U.S. Const. Art. I, § 8, cl. 8.

[138] *Cf.* Eric E. Johnson, *Intellectual Property and the Incentives Fallacy*, 39 Fl. State L. Rev 623, 624-79 (2012) (criticizing the incentives justification given that social science finds that "innovative and creative activity will thrive without artificial support."); Shyamkrishna Balganesh, *Foreseeability and Copyright Incentives*, 122 HARV. L. REV. 1572-1633 (2008) ("Copyright's principal justification has for long been the theory of creator incentives . . . Yet current copyright doctrine does surprisingly little to give effect to this theory.").

[139] Brian West & Matthew Varacallo, *Good Samaritan Laws,* (Sept. 20, 2020) https://www.ncbi.nlm.nih.gov/books/NBK542176/.

1959, been codified in statute in all 50 states.[140] Their elements generally include some minor variation of: (1) the care was performed as a result of an emergency; (2) the initial emergency was not caused by the volunteer; and (3) the emergency care was not given by the volunteer in a grossly negligent or reckless manner.[141] For example, Massachusetts' Good Samaritan Law reads:

> Any person, whose usual and regular duties do not include the provision of emergency medical care, and who, in good faith, attempts to render emergency care including, but not limited to, cardiopulmonary resuscitation or defibrillation, and does so without compensation, shall not be liable for acts or omissions, other than gross negligence or willful or wanton misconduct, resulting from the attempt to render such emergency care.[142]

Some statutes go further in mandating a duty to rescue, to the extent that a bystander witnesses an emergency, he or she must, in these states, such as Rhode Island, assist those who are suffering, thus requiring assistance to be rendered during a true medical emergency.[143] In April of 2020, the Wisconsin state government implemented rules providing immunity from civil liabilities resulting from injuries related to the manufacture and distribution of "emergency medical equipment" for "disease associated with the public health emergency related to the novel coronavirus pandemic."[144] The immunity is limited to "Good Samaritan" suppliers where the items are either donated, or sold "at a price not to exceed the cost of production."[145]

The purpose of a Good Samaritan law, as a matter of public policy, is to encourage emergency assistance by removing the threat of liability for damage done by the assistance.[146] It is meant to protect those that do not

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[140] *Id.*

[141] *Id.*

[142] G. L. c.258C, § 13.

[143] *See* West, *supra* note 139.

[144] Paul J. Covaleski & Josh Johanningmeier, *Wisconsin COVID-19 Law Includes Limited Civil Liability Immunities for Suppliers of Essential Equipment and Medical Professionals*, NAT'L L. REV, XI 270, (Apr. 15, 2020)**.**

[145]*Id.*

[146] Brian West & Matthew Varacallo, *Good Samaritan Laws,*(Sept. 20, 2020) (unpublished manuscript available at https://www.ncbi.nlm.nih.gov/books/NBK542176/) (also noting that "the premise underlying the good Samaritan law traces its origin to the ancient biblical definition of a good Samaritan as an individual who intervenes to assist another individual without prior notion or responsibility or Samaritan *promise of compensation.");* Eric A. Brandt, *Good Laws – The Legal Placebo: A Current Analysis*, 17 AKRON LAW REVIEW (1984) (noting the biblical origin).

usually administer assistance—i.e., non-experts—in the event they encounter an individual who needs help. In other words, if people stopped to think about whether they will face liability prior to offering potentially life-saving assistance, valuable time would be lost. Thus, "we are improved as a society if the potential rescuers (i.e., the good Samaritans) are solely concerned about helping a person in need as opposed to worrying about the possible liability associated with assisting their fellow man or woman."

2. Public Necessity

In tort law, the common law doctrine of necessity is an affirmative defense that can be used against charges of trespass to real or personal property—an intentional tort—in cases where a defendant interferes with a plaintiff's property out of need. Trespass is an infringement on a property owner's legal right to enjoy the benefits of ownership, in which a civil action can be brought. The law draws a distinction between private necessity—where the trespass is necessary to protect harm to oneself or others—and public necessity—an emergency situation to protect the greater community or society as a whole from a greater harm that would have occurred had the defendant not committed trespass. While private necessity provides only a partial defense to trespass, public necessity serves as an absolute defense where a defendant is not liable for any damages caused by trespass.

The action of public necessity consists in appropriating or destroying another's property so as to avert a public calamity.[147] According to the Restatement Second of Torts: "One is privileged to enter land in the possession of another if it is, or if the actor reasonably believes it to be, necessary for the purpose of averting an imminent public disaster."[148] The classic case involves destroying property to prevent the spread of disease or fire or other calamity and thus injury to the public.[149] The elements of necessity are the following: (1) a reasonable belief that one's actions were necessary to prevent imminent harm; (2) there was no practical alternative available for avoiding the harm; (3) the actor did not cause the threat of harm in the first place; and (4) the damage caused was less than the harm that would

[147] Perhaps the landmark case of public necessity is Surocco v. Geary, 3 Cal. 69 (Cal. 1853) (mayor of San Francisco ordered fire department to destroy plaintiff's house to contain wildfires; defense successful because potential damage to the city would have been substantially more severe without the order to demolish the plaintiff's home.).

[148] Restatement (Second) of Torts § 196 (Am. L. Inst. 1965).

[149] The paradigmatic cases of private necessity include Vincent v. Lake Erie Transportation Co., 124 N.W. 221 (Minn. 1910) (destruction of wharf to save life) and Ploof v. Putnam, 71 A. 188 (Vt. 1908) (destruction of dock to save life)

have occurred otherwise. The principle underlying public necessity is that the law regards the welfare of the public as superior to individual interests. Thus, individual interests must yield to collective ones when there is a conflict between the two.[150]

According to renowned criminal law scholar Glanville Williams, "Some acts that would otherwise be wrong are rendered rightful by a good purpose, or by the necessity of choosing the lesser of two evils."[151] Like the Good Samaritan doctrine, public necessity can be seen as a utilitarian calculation consistent with modern IP theory, not a moral principle. That is, courts grant necessity privileges when the risk of harm to an individual (in the case of private necessity) or the public (in the case of public necessity) is greater than the harm to property. In situations "where there is an unhappy choice between the destruction of one life and the destruction of many, utilitarian philosophy would certainly justify the actor in preferring the lesser evil."[152] Indeed, necessity "represents a concession to human weakness in cases of extreme pressure, where the accused breaks the law rather than submitting to the probability of greater harm if he does not break the law." In this way, public necessity is consistent with the economic and utilitarian calculus underlying modern patent and copyright law.[153]

In a pandemic area, we may need to appropriate the intellectual property of others to save lives. To the extent we consider intellectual property the functional equivalent of real or personal property, trespassing on a patent or copyright would be excused and no damages should be awarded if the reason was COVID-19 related. This is because when a private actor invokes publicity necessity, they have a complete privilege and do not have to pay compensation to the property owner.[154]

3. Emergency Bans on Evictions During COVID-19

In the real property context, many states, counties, and municipalities across the country are taking disparate steps to minimize the impact of COVID-19 on tenants by putting moratoriums on evictions, prohibiting late

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[150] John Alan Cohan, *Private and Publicity Necessity and the Violation of Property Rights*, 83 N. DAKOTA L. REV. 651, 653 (2007) (citing City of Durham v. Eno Cotton Mills, 54 S.E. 453, 464 (1906)).

[151] Glanville Williams, *The Sanctity of Life and the Criminal Law* (Alfred. A Knopf. Inc. 1957).

[152] *Id*. at 200.

[153] *But see* George C. Christie, T*he Defense of Necessity Considered from the Legal and Moral Points of View*, 48 DUKE L. J. 975 (1999).

[154] RESTATEMENT (SECOND) OF TORTS § 196 cmt. a (AM. LAW. INST. 1965).

rent fees and putting holds on the shut off of utilities due to nonpayment.[155] Landlords are ordinarily allowed to evict tenants under circumstances where rent is past due, assuming certain conditions are met—but not so during COVID. Under the CARES Act, renters living in properties with government-backed mortgages were being protected from eviction, at least temporarily.[156] Freddie and Fannie Mae have so far prohibited landlords of single-family properties with Freddie and Fannie Mae backed mortgages from evicting tenants.[157]

If copyright and patent are forms of property, then copyright and patent owners can be considered a sort of landlord. This argument is based on a certain rhetorical move. As Brian L. Frye argues in his essay, *Literary Landlords in Plaguetime*, to the extent that copyright owners argue that copyright is a property right, roughly analogous to real and tangible property rights, then copyright owners naturally function as landlords.[158] Landlords own real property and rent it to others. This is how they generate revenue.

Frye writes regarding the analogy to copyright owners:

> [C]opyright owners own copyrights in order to generate a profit by renting works of authorship to consumers. You don't need to own the copyright in a work of authorship in order to consume it, you just need the permission of the copyright owner. Copyright has economic value only because it enables copyright owners to generate revenue by renting works of authorship to people who want to consume them. If no one rents a work of authorship, then it isn't generating any revenue. Copyright owners are analogous to landlords because they own a (potentially) valuable capital asset and generate revenue by collecting rents from its consumption. Indeed, the analogy is delightfully apt because the congruence is so obvious, once observed.

Property is, as philosopher Samir Chopra notes, "the foundation of a culture and the foundation of an economic system."[159] From both political

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[155] Ann O'Connell, *Emergancy Bans on Evictions and Other Tenant Protections Related to Coronavirus*, NOLO, (Sept. 24, 2021) https://www.nolo.com/legal-encyclopedia/emergency-bans-on-evictions-and-other-tenant-protections-related-to-coronavirus.html.

[156] *Id.*

[157] *Id.*

[158] Frye, *supra* note 7, at 238.

[159] Samir Chopra, *End Intellectual Property*, AEON (Nov. 12, 2018), https://aeon.co/essays/the-idea-of-intellectual-property-is-nonsensical-and-pernicious [https:// perma.cc/75VE-84EC]; *See also* Richard M. Stallman, *Did You Say 'Intellectual Property'? It's a Seductive Mirage*, 4 POL'Y FUTURES EDUC. 334 (2006) (arguing that we should stop using the term intellectual property); *Cf.*. JAMES BOYLE, *The Public Domain: Enclosing The Commons Of The Mind 8* (2008) (noting that the concerns with the term "intellectual property" are "real and

and economic perspectives, property has "expressive impact," "ideological weight and propaganda value."[160] Put differently, the property metaphor serves to moralize intellectual property law, despite its more common U.S. claim of being utilitarian—based on economic incentives.[161] To suggest that property is involved implies that IP "can be stolen, and therefore must be protected with the same zeal that the homeowner guards her home against invaders and thieves."[162] But not always. As Frye puts it, "[i]f you live by the [property] metaphor, you die by the metaphor."[163]

Under this analogy, where copyright is a form of rent-seeking, and by natural extension patent, what is needed in times of crisis is a moratorium on copyright and patent damages similar to the 2020 moratorium on real property rents.

IV. CONCLUSION

This Article has highlighted the need for emergency relief from intellectual property liability—or the threat of liability—during the COVID-19 pandemic. In the context of patent and copyright, I have discussed the potential for liability, focusing especially on the PPE crisis, against the backdrop of increasingly strengthened intellectual property protections and the moral right perspective. I offer a balanced approach, focusing on existing potential solutions including march-in rights, compulsory licensing, and free IP pledges, and also potential new solutions based in well-recognized doctrines and concepts in property law. I conclude that ultimately, an emergency protection declaration along these lines of argument could provide a comprehensive solution so that collective efforts aimed at combating the pandemic are appropriately balanced with patent and copyright's individual economic incentives model during this time of crisis.

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well-founded" but disagreeing with the conclusion that we should give up the term considering its usefulness as an umbrella category); Dustin Marlan, *Is the Word Consumer Biasing Trademark Law*, 8 Tex. A&M L. Rev. 367, 372 (2021) (arguing that "the term property obscures the realization that beyond the party that "owns" the intellectual property right, there is an excluded public domain whose interests are not being rhetorically accounted for by use of the term.").

[160] *Id*.

[161] Frye, *supra* note 7, at 236.

[162] Chopra, *supra* note 159.

[163] Frye, *supra* note 7, at 244.

BRING IT ON IN REAL LIFE: INTELLECTUAL PROPERTY LAW STILL FAILS TO PROTECT MINORITY CREATORS

Alexis Pinkston[*]

I. INTRODUCTION

Have you watched a TikTok[1] dance lately? Or any other viral dance video? In an era of social media where short video clips of dances thrive and go viral, you may be surprised to know that usually these dances are not protectable intellectual property. Such lack of protection has led to subsequent creators stealing dance moves without giving proper credit. This practice is similar to the plot of the film *Bring It On,* in which a cheerleading squad discovers that its past captain stole all of the team's cheer routines from an inner-city school.[2] Generally, choreography, as a subset of dance, is protected as intellectual property under copyright law, but not all dance is copyrightable. There is little protection for the ordinary choreographer of dances on social media, and there is no protection for choreographers' dances that are considered "social dances" or consist of only a few steps. Historically, people of color have predominantly not had access to and have not been protected by the copyright system, resulting in situations where White people frequently profit off stolen works created by people of color.

This paper will argue that there should be more protection for choreographers of social dances and creators of choreography generally to ensure more equitable access to copyright protection. The rest of this article will proceed as follows: In part one, I discuss the background of intellectual property law and choreography as a copyrightable subject matter, including the evolution of copyrightable choreography from ballet to the recent addition of hip hop and the historical theft of minority creators' works. In part two, I discuss the relevant recent unsuccessful cases related to dance moves and social dances under intellectual property law, which show that the intellectual

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[1] TikTok is a video-sharing app that lets users create and share short videos on any topic. Werner Geyser, *What is TikTok? – The Fastest Growing Social Media App Uncovered,* INFLUENCER MARKETING HUB, (June 11, 2021) https://influencermarketinghub.com/what-is-tiktok/ (last visited Apr. 11, 2021).

[2] BRING IT ON (Universal Pictures 2000).

property system still does not protect smaller creators from big businesses. In part three, I discuss the current protections available for social dances, my argument for increasing such protections of these dances, and the probable effect of including social dances as copyrightable subject matter.

II. BACKGROUND

This section will look at the history of intellectual property and copyright law specifically, including Congress's relatively recent decision to include choreography as a copyrightable work. It will also examine the racially fraught history of intellectual property law in this country.

A. History of Dance as Intellectual Property

The first federal copyright protection began in 1790 by the first Congress.[3] The United States Constitution contains a Copyright Clause,[4] which authorizes Congress to enact legislation surrounding copyrighting.[5] The Framers of the Constitution intended copyright to be "the engine of free expression."[6] The economic philosophy behind the Copyright Clause was that the encouragement of individual effort by personal gain is the best way to advance the welfare of the public through the arts and sciences.[7] Copyright law generally is intended "to grant valuable, enforceable rights to authors, publishers, etc., without burdensome requirements; to afford greater encouragement to the production of literary [or artistic] works of lasting benefit to the world."[8] More recently, the Copyright Clause has been interpreted by the U.S. Supreme Court to mean that the intellectual property system should incentivize the creation and dissemination of ideas.[9]

For any work to be copyrightable, it must be original and fixed in a tangible medium of expression.[10] An original work must possess some minimal degree of creativity, meaning that the work must at least be more creative than a phone book.[11] Fixing a work in a tangible medium of

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[3] 1 Nimmer on Copyright § A.01 (2020) (first citing Act of May 31, 1790, ch. 15, 1 Stat. 124; and then David P. Currie, *The Constitution in Congress: Substantive Issues in the First Congress, 1789–1791*, 61 U. CHI. L. REV. 775, 825–28 (1994)).

[4] U.S. CONST. art. I, § 8, cl. 8.

[5] 1 Nimmer on Copyright § A.01 (2020) *supra* note 3.

[6] Harper & Row, Publrs. v. Nation Enters., 471 U.S. 539, 558 (1985).

[7] Mazer v. Stein, 347 U.S. 201, 219 (1954).

[8] Washingtonian Publ'g Co. v. Pearson, 306 U.S. 30, 36 (1939).

[9] Golan v. Holder, 565 U.S. 302, 325-26 (2012).

[10] 17 U.S.C. § 102.

[11] Feist Publ'ns, Inc. v. Rural Tel. Servs. Co., 499 U.S. 340, 364 (1991).

expression could include writing the idea down, recording a performance on video, or creating a drawing. Once a copyrightable work is fixed in a tangible medium, the copyright in the work exists.[12] Registering the work with the U.S. Copyright Office is only necessary for the owner of the copyright to be able to sue another to enforce the owner's exclusive rights to use the copyrighted material.[13]

Choreographic works were first recognized as a copyrightable category in 1976.[14] A work created prior to January 1, 1978, may be copyrightable as a "dramatic work," meaning that the work "tell[s] a story, develop[s] a character, or express[es] a theme or emotion by means of specific dance movements and physical actions."[15] This "dramatic work" category left out most choreography outside of traditional ballet.[16] Choreographic works were originally not granted copyright protection under their own category because (1) Congress did not find dance worthy of copyright protection and not beneficial to society, (2) choreography needed to tell a story, be part of a dramatic work, or convey the proper moral tone, and (3) Congress did not know how to define abstract choreography.[17] The decision by Congress to recognize choreography as copyrightable subject matter was due to advocacy efforts by choreographers, the rise of choreography in popular culture, and Congress's recognition of the importance of dance as an art form.[18]

Even after copyright protection was extended to choreography as its own category, Congress intended to protect only "expressive works of authorship, such as ballet or modern dance," and "did not intend to protect all forms of dance or movement."[19] The U.S. Copyright Office still has a preference for ballet today, stating in its Compendium of U.S. Copyright Office Practices that "as a general rule, classical ballet and modern abstract dance are

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[12] *Copyright Basics,* U.S. COPYRIGHT OFFICE, Circ. 1, at 4, https://www.copyright.gov/circs/circ01.pdf.

[13] *Id.*

[14] U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 102.2(a) (3d ed. 2021) (hereinafter COMPENDIUM (THIRD)).

[15] COMPENDIUM (THIRD) *supra* note 14, at § 2122.3; 17 U.S.C. § 102(a)(4).

[16] Yola Robert, *JaQuel Knight Is Paving The Way For The Future Of Copyrighting Dance,* FORBES (Nov. 23, 2020, 1:33 PM), https://www.forbes.com/sites/yolarobert1/2020/11/23/jaquel-knight-is-paving-the-way-for-the-future-of-copyrighting-dance/?sh=59e240cfe72e.

[17] Kathleen Abitabile & Jeanette Picerno, *Dance and the Choreographer's Dilemma: A Legal and Cultural Perspective on Copyright Protection for Choreographic Works*, 27 CAMPBELL L. REV. 39, 42-43 (2004).

[18] Katie M. Benton, *Can Copyright Law Perform the Perfect Fouetté?: Keeping Law and Choreography on Balance to Achieve the Purposes of the Copyright Clause*, 36 PEPP. L. REV. 59, 82 (2008).

[19] COMPENDIUM (THIRD) *supra* note 14, at § 805.5(B).

considered choreographic works, because they objectively constitute an expressive compositional whole."[20]

Of the eight categories of works that are copyrightable,[21] "pantomimes and choreographic works" are one of the three that are not defined by Congress.[22] The reasoning given by Congress behind not defining "choreographic work" is that it has a "fairly settled meaning" and it is not necessary "to specify that 'choreographic works' do not include social dance steps and simple routines."[23] However, the U.S. Copyright Office has defined what constitutes a choreographic work.[24] For the U.S. Copyright Office, choreography is defined as "the composition and arrangement of a related series of dance movements and patterns organized into a coherent whole."[25] Dance is defined differently, as the "static and kinetic succession of bodily movement in certain rhythmic and spatial relationships and in relation to time and space."[26] Choreography is not the same as dance; instead, it is a subset of dance.[27] The U.S. Copyright Office states that a choreographic work typically contains one or more of the following elements:

> Rhythmic movements of one or more dancers' bodies in a defined sequence and a defined spatial environment, such as a stage; a series of dance movements or patterns organized into an integrated, coherent, and expressive compositional whole; a story, theme, or abstract composition conveyed through movement; a presentation before an audience; a performance by skilled individuals; and musical or textual accompaniment.[28]

For a choreographed work to be registered with the U.S. Copyright Office, it must be fixed in a tangible medium with sufficient detail to permit the work to be performed in a consistent and uniform manner.[29] Some acceptable formats of the recordation of the work in a tangible medium include dance notation, such as Labanotation[30] and Benesh Dance Notation; video recordings of a performance; and textual descriptions, photographs, or

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[20] COMPENDIUM (THIRD) *supra* note 14, at § 805.7.

[21] *Id.*

[22] *Id.*

[23] H. R. REP. NO. 94-1476, at 53-54 (1976).

[24] U.S. COPYRIGHT OFFICE, *Glossary* to COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES, at 3 (3d ed. 2021).

[25] *Id.*

[26] *Id.*

[27] COMPENDIUM (THIRD) *supra* note 14, at § 805.1.

[28] COMPENDIUM (THIRD) *supra* note 14, at § 805.2(A-F).

[29] COMPENDIUM (THIRD) *supra* note 14, at § 805.3(A-B).

[30] *See generally* Robert, *supra* note 16 (showing a page of the Labanotation score for "Single Ladies").

drawings.[31] Labanotation is a method of capturing movement on a page.[32] The Benesh Dance Notation system is a method for recording human movement, similar to music notation.[33]

Some choreography is explicitly listed by the U.S. Copyright Office as not protectable via a copyright. These non-protectable works include commonplace movements or gestures, social dances, ordinary motor activities, athletic movements, and routines not performed by humans.[34] Commonplace movements or gestures include yoga positions, the grapevine, spelling out letters with your arms, and a celebratory end zone dance.[35] Social dances include ballroom dances, square dances, or any other dance intended to be performed by members of the general public rather than skilled professionals.[36] Ordinary motor activities include skateboarding tricks, feats of physical skill, and a tennis swing.[37] The U.S. Copyright Office says that it cannot register short dance routines consisting of only a few steps with minor linear or spatial variations, even if the routine is novel or distinctive.[38]

Individual dance steps and short dance routines like the grapevine or the second position in ballet are not copyrightable because they are the "building blocks of choreographic expression, and allowing copyright protection for these elements would impede rather than foster creative expression."[39] However, compilations of those activities may be copyrightable if the arrangement of movements results in an "expressive compositional whole."[40] Compilations that are not considered an "expressive compositional whole," and are thus not protectable, include a series of aerobic activities, a yoga sequence, and dance movements intended for use in a fitness class.[41] The U.S. Copyright Office describes copyrightable choreography and uncopyrightable

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[31] COMPENDIUM (THIRD) *supra* note 14, at § 805.3(D)(1-3).

[32] *Labanotation Basics*, DANCE NOTATION BUREAU, http://dancenotation.org/lnbasics/frame0.html (last visited Apr. 27, 2021).

[33] *Benesh International: Benesh Movement Notation*, ROYAL ACADEMY OF DANCE, https://www.royalacademyofdance.org/benesh-international-benesh-movement-notation/ (last visited Apr. 27, 2021).

[34] COMPENDIUM (THIRD) *supra* note 14, at § 805.4(C), 805.5(B)(2-3).

[35] *Copyright Registration of Choreography & Pantomime,* 52 U.S. COPYRIGHT OFFICE, at 3, https://www.copyright.gov/circs/circ52.pdf.

[36] COMPENDIUM (THIRD) *supra* note 14, at § 805.5(B)(2).

[37] *Copyright Registration of Choreography and Pantomime,* U.S. COPYRIGHT OFFICE, Circ. 52, at 3, https://www.copyright.gov/circs/circ52.pdf (last visited Apr. 27, 2021).

[38] COMPENDIUM (THIRD) *supra* note 14, at § 805.5(A).

[39] Brantley v. Epic Games, Inc., 463 F. Supp. 3d 616, 622 (D. Md. 2020) (citing Horgan v. Macmillan, Inc., 789 F.2d 157, 161 (2d Cir. 1986)).

[40] COMPENDIUM (THIRD) *supra* note 14, at § 805.7.

[41] U.S. COPYRIGHT OFFICE, *supra* note 37, at 4.

dance as being on a continuum, with ballet, modern dances, "and other complex works" at one end, and social dances, simple routines, and other uncopyrightable movements at the other end.[42]

Derivative works are also protected under copyright.[43] A derivative work is a work derived from a preexisting work.[44] If one were to create a new television show based on the original characters in *Friends*, then the new show would be a derivative work, and therefore one would not be able to copyright the characters, but only the new story that one created.[45] The copyright in a compilation or derivative work is only for the material contributed by the author of the new work, meaning that a new author cannot claim copyright protection for material in the original work that the new work was derived from.[46] The creator of a derivative work infringes on the protected portion of the original unless the creator of the derivative work obtains a license from the owner of the underlying copyright.[47]

While choreography is copyrightable now, copyrights in choreography are not typically registered. Of the over 500,000 applications received by the U.S. Copyright Office each year, the number of applications for choreographic works is typically less than 20.[48]

B. Dance, Race, and Culture

While copyright law has existed for decades, not all people were allowed to participate in the system of intellectual property and copyright registration at its inception.[49] There has, unfortunately, been a long history in the United States of theft of intellectual property from Black creators and the exclusion of Black creators from the registration system.[50]

Cultural appropriation has been consistent throughout the United States' history, resulting in the dominant culture stereotyping and demeaning

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[42] COMPENDIUM (THIRD) *supra* note 14, at § 805.5(B).

[43] 17 U.S.C. §103.

[44] 17 U.S.C. §101.

[45] *See generally* Anderson v. Stallone, No. 87-0592 WDK (Gx), 1989 U.S. Dist. LEXIS 11109 (C.D. Cal. Apr. 25, 1989).

[46] 17 U.S.C. §103.

[47] Sissom v. Snow, 626 F. App'x 163, 166 (7th Cir. 2015).

[48] Robert, *supra* note 16.

[49] *See generally* K.J. Greene, *Copyright, Culture and Black Music*, 21 HASTINGS COMM. & ENT. L.J. 339, 388 (1999) ("Black artists as a class have not received "equal protection" of intellectual property rights in part due to social and economic inequality and social discrimination.").

[50] K.J. Greene, *"Copynorms," Black Cultural Production, and the Debate over African-American Reparations*, 25 CARDOZO ARTS & ENT LJ 1179 (2008).

minority cultures.[51] In the nineteenth century, White audiences found African slave music and dance to be a nuisance,[52] but those same White audiences sought African Americans who could teach them popular dances.[53] The minstrel shows of the nineteenth and twentieth centuries further exemplify the cultural appropriation that is so prevalent in the United States' history. Those minstrel shows were based on "the appropriation of Black creativity" and featured Whites onstage "masquerading in blackface as Blacks."[54] Some have said that those minstrel shows, in their imitation of African Americans, were "a tribute to the black man's music and dance in that the leading figures of the entertainment world spent the better part of the nineteenth century imitating his style."[55]

In the music industry, cultural appropriation "waters down the vitality of Black music to make it more palatable for White audiences"[56] and erases the culture that was appropriated.[57] Throughout the United States' history, White artists appropriated not only other cultures, but also entire songs without acknowledgement, attribution or authorization.[58] For example, Elvis Presley appropriated Big Mama Thornton's song "Hound Dog," which she had recorded three years before him.[59] Further, Elvis Presley "*frequently* covered songs recorded by black artists for struggling independent labels."[60] Led

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[51] *Id.* at 1203 (quoting K.J. Greene, *Copyright, Culture and Black Music*, 21 HASTINGS COMM. & ENT. L.J. 339, 358, 373 (1999)).

[52] *Id.* at 1187 (citing Alfred L. Brophy, *Integrating Spaces: New Perspectives on Race in the Property Curriculum*, 55 J. LEGAL EDUC. 319, 333 (2005) (discussing nuisance lawsuits filed by White property owners in proximity to Black churches)).

[53] *Id.* (citing Joseph E. Holloway, *Africanisms in American Culture* 326 (2d ed. 2005) ("[T]he 'Charleston,' a dance with origins in Africa, 'became so popular that a premium was even placed on hiring of black domestics that could dance it well enough to teach the [white] lady of the house.'")).

[54] *Id.* at 1191 (citing FRANCIS DAVIS, THE HISTORY OF THE BLUES: THE ROOTS, THE MUSIC, THE PEOPLE FROM CHARLEY PATTON TO ROBERT CRAY 37 (1995)).

[55] *Id.* (citing MARTHA BAYLES, HOLE IN OUR SOUL: THE LOSS OF BEAUTY AND MEANING IN AMERICAN POPULAR CULTURE 27 (1994)).

[56] Greene, *supra* note 49, at 373.

[57] Greene, *supra* note 50, at 1203 (citing ARNOLD WHITE, THE RESISTANCE: BEYOND BORDERS 546-8 (2001).

[58] Keith Aoki, *Distributive Justice and Intellectual Property: Distributive and Syncretic Motives in Intellectual Property Law (with Special Reference to Coercion, Agency, and Development),* 40 U.C. DAVIS L. REV. 717, 762 (2007).

[59] Olufunmilayo B. Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context*, 84 N.C.L. REV. 547, 617 (citing Arnold Shaw, *Researching Rhythm & Blues*, 1 BLACK MUSIC RES. J. 71, 72 (1980)).

[60] *Id.* (emphasis added) (citing Bruce Tucker, *"Tell Tchaikovsky the News": Postmodernism, Popular Culture, and the Emergence of Rock "N' Roll*, 9 BLACK

Zeppelin's song "Whole Lotta Love" (1969) copied "You Need Love," written by Willie Dixon.[61]

Still today, the United States' current system of intellectual property registration encourages the intellectual theft of Hip-Hop artists' material by continuing to exclude dance moves as copyrightable material.[62] While Western European choreography has historically been protected, African dance styles have continued to lack protection.[63] The West African tradition of introducing children to dance through having them repeat dance moves of their family members until the moves were mastered was transplanted to the American South through slavery.[64] In his article arguing for copyright protection for dance moves, Elijah Hack posits that the repeatability of African-American and hip-hop dance, in contrast to the complexity of ballet choreographies, helps explain why Western European choreography is protected and African dance moves lack protection.[65] Traditional, full-length hip hop choreography, unlike the shorter dances seen on TikTok, do not lack any of the complexity of traditional ballet.[66] The lack of copyright protection for social dances in comparison to traditional ballet likely stems from the traditional requirement that the choreography convey a story, as seen in the early copyrightability of dance only as a dramatic work; the lack of appreciation for non-Western art forms; and the traditional exclusion of Black creators from intellectual property protection.

The *Martha Graham* case, discussed below, involves the copyrighting of ballet choreography and illustrates just how readily courts recognize the copyrightability of ballet. The example of the recent successful copyright

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MUSIC RES. J. 271, 282 (1989)).

[61] Aoki, *supra* note 58.

[62] Elijah Hack, *Milly Rocking Through Copyright Law: Why the Law Should Expand to Recognize Dance Moves as a Protected Category*, 88 U. CIN. L. REV. 637, 650 (2020).

[63] *Id.* at 650.

[64] *Id.* (citing Danielle Jacobowitz, Danielle Jacobowitz, *The Commodification and Appropriation of African-American Vernacular Dances* (2016) (Ph.D. dissertation, University of Washington), https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/36569/Jacobowitz_washington_0250O_15807.pdf?sequence=1.

[65] *Id.*

[66] *Compare* Prix de Lausanne, *Precious Adams - 2014 Prize Winner - Finals - Classical Variation*, YOUTUBE (Feb. 10, 2014), https://www.youtube.com/watch?v=YT95D6leFNI, *with* Julian Deguzman, *Sicko Mode- Travis Scott- Julian Deguzman Choreography,* YOUTUBE (Aug. 25, 2018), https://www.youtube.com/watch?v=CMil_QRuzgU, *and* ThePalaceDanceStudio, *BBHMM | ICONIC EDITION - The Royal Family Virtual Experience*, YOUTUBE (Nov. 5, 2020), https://www.youtube.com/watch?v=HdYQt0YU2XI.

registration of JaQuel Knight's choreography for "Single Ladies," discussed more fully in subsection two, demonstrates copyright law's move towards being more inclusive to other forms of dance.

1. Martha Graham School & Dance Foundation, Inc.

The *Martha Graham* case demonstrates how easily ballet can be recognized as a copyrightable work in contrast to other types of dances, which are more difficult to register for copyright protection. In *Martha Graham*, a dance foundation and estate sued a dance center and school concerning the copyright ownership of 70 dances created by Martha Graham.[67] While the ownership of the copyrights in those ballets was at issue, whether the works were copyrightable at all was not at issue.[68] Both the plaintiffs and the defendants had successfully registered copyrights in some of the ballets at issue.[69]

One ballet that was not copyrightable was *Tanagra*, which was created and published in the 1920s without copyright notice, so it had entered the public domain before this case began.[70] Material in the public domain is not protected by copyright and may be freely used.[71] In an earlier version of the case, the court explained that the U.S. Copyright office had no problem with whether the ballets were choreography or not, but the issue came down to whether the ballets had been published or not.[72] Whether the ballets had been published or not helped determine ownership of the ballets.[73] This ease of registering ballets is in stark contrast to the difficulty that choreographers of other styles of choreography have experienced in trying to register their works.

2. JaQuel Knight's Choreography

On July 9, 2020, JaQuel Knight, the choreographer of Beyoncé's "Single Ladies" music video, successfully copyrighted his "Single Ladies"

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[67] Martha Graham Sch. & Dance Found., Inc. v. Martha Graham Ctr. of Contemporary Dance, Inc., 374 F. Supp. 2d 355 (S.D.N.Y. 2005).

[68] *Id.*

[69] Martha Graham Sch. & Dance Found., Inc. v. Martha Graham Ctr. of Contemporary Dance, Inc., 224 F. Supp. 2d 567, 587 (S.D.N.Y. 2002).

[70] *Martha Graham Sch. & Dance Found., Inc.*, 374 F. Supp. 2d at 356-357.

[71] U.S. COPYRIGHT OFFICE, *Glossary* to COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES, at 16 (3d ed. 2021).

[72] *Martha Graham Sch. & Dance Found., Inc.*, 224 F. Supp. 2d at 581-86.

[73] *Id.*

choreography.[74] Knight's Single Ladies choreography was one of the first pieces of non-ballet choreography to be approved for copyright.[75] JaQuel Knight has been described as "the first person to copyright dance moves."[76] Nothing in the U.S. Copyright Office's guidance indicates that it now views dance moves or social dances as copyrightable. It is more likely that the U.S. Copyright Office determined that JaQuel Knight's choreography fits under the copyrightable category of "choreography".

Knight has stated that his reasoning for copyrighting his choreography is not to protect choreographers from people doing the dances at home, but instead to protect the creator from "huge corporations that come in and take advantage."[77] Copyrighting his choreography also ensures that choreographers are "recognized and receive appropriate credit and protection."[78]

Knight has since gone on to successfully register copyrights in the choreography for the song "Body" by Megan Thee Stallion and in the choreography for the song "Already" by Beyoncé.[79] Knight has recently created his own choreography business that will function like a music publisher, in that it will broker licensing deals, protect intellectual property, and oversee the rights to Knight's dance moves.[80] The company may also be involved in filing Digital Millennium Copyright Act takedown requests with TikTok and YouTube when users upload content involving copyrighted moves.[81] Knight's victories in court and subsequent business ventures may open the door to successful copyright registrations of shorter choreographic works, like dance moves or social dances.

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[74] U.S. COPYRIGHT OFFICE, Copyright Catalog, Registration No. PA0002247718 (2020).

[75] Robert, *supra* note 16.

[76] James Hale, *"Single Ladies" Choreographer JaQuel Knight Becomes First Person to Copyright Dance Moves,* TUBEFILTER (Apr. 23, 2021) https://www.tubefilter.com/2021/04/23/single-ladies-choreographer-copyright-moves-jaquel-knight/.

[77] Ari Shapiro et al., *He Choreographed 'Single Ladies' And 'WAP.' Now He's Got A Bigger Mission*, NPR (Nov. 16, 2020, 3:47 PM), https://www.npr.org/2020/11/16/934603252/he-choreographed-single-ladies-and-wap-now-hes-got-a-bigger-mission.

[78] Robert, *supra* note 16.

[79] U.S. COPYRIGHT OFFICE, Copyright Catalog, Registration Nos. PA0002271338, PA0002266073 (2020).

[80] Jazz Tangcay, *Beyonce and Megan Thee Stallion Choreographer JaQuel Knight Launches Company to Copyright Dance Moves*, VARIETY (Apr. 22, 2021, 9:05 AM), https://variety.com/2021/artisans/news/beyonce-choreographer-jaquel-knight-copyright-dance-moves-1234957578/.

[81] Hale, *supra* note 76.

II. THE EPIC GAMES CASES

Several recent cases have advanced the caselaw surrounding choreography as intellectual property and demonstrated the issues surrounding copyrighting choreography, including defining what exactly is a choreographic work. The following cases all involve the videogame developer Epic Games and choreography used in its videogame Fortnite.[82] Epic Games sells dance "emotes," which copy choreography from popular culture, for use in Fortnite.[83] The result of Epic Games profiting from this use of choreography is that many of the creators of the dances or the artists associated with the original dances have come forward to sue Epic Games for the use of their moves.

A. Ribeiro

Actor Alfonso Ribeiro sued the creators of Epic Games for its depiction of "The Carlton" in Fortnite.[84] "The Carlton" is a dance performed by Alfonso Ribeiro's character Carlton Banks on the television show *The Fresh Prince of Bel-Air*.[85] Ribeiro's suit was dismissed without prejudice because Ribeiro had not yet applied for copyright protection from the U.S. Copyright Office.[86] Once he attempted to register his copyright, the U.S. Copyright Office rejected his application because "The Carlton" did not meet the elements of a copyrightable choreographic work because it consisted of only three dance steps.[87] However, this rejection by the U.S. Copyright Office

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[82] *See* Cinema of Gaming, *Fortnite Dances in Real Life that Are 100% in Sync! (Original Fortnite Dances in Real Life)*, YOUTUBE (Dec. 21, 2019), https://www.youtube.com/watch?v=vvKTm1m-AIo (showing the original source material for Fortnite dances alongside the Fortnite dances from the videogame itself).

[83] Nick Statt, *Fortnite Keeps Stealing Dances — And No One Knows If It's Illegal,* THE VERGE (Dec. 20, 2018, 8:55 AM), https://www.theverge.com/2018/12/20/18149869/fortnite-dance-emote-lawsuit-milly-rock-floss-carlton.

[84] Complaint at 1, Ribeiro v. Epic Games, Inc., No. 2:18-cv-10412 (C.D. Cal. Dec. 17, 2018).

[85] Andrea Park, *How Alfonso Ribeiro came up with "The Carlton Dance,"* CBS NEWS (Aug. 19, 2015, 4:00 PM), https://www.cbsnews.com/news/how-alfonso-ribeiro-came-up-with-the-carlton-dance-fresh-prince-of-bel-air/.

[86] Bill Donahue, *After Big Copyright Ruling, Dance Cases To Be Refiled*, LAW360 (Mar. 7, 2019, 10:11 PM), https://www.law360.com/articles/1136676 [https://perma.cc/8YKF-TS24].

[87] *Id.*

does not prevent Ribeiro and others from pursuing his lawsuit. The Copyright Office merely must have begun the process of taking action on a copyright application before a plaintiff can file suit;[88] the U.S. Copyright Office does not have to have granted the copyright protection.[89]

B. 2 Milly

Epic Games has also been sued by 2 Milly for use of the Milly Rock dance in Fortnite. 2 Milly is a rapper who created the Milly Rock dance, and the corresponding song "Milly Rock" in 2014.[90] The dance is sold in the Fortnite game as an emote renamed "Swipe It."[91] Similar to the case of "The Carlton," the suit was dropped because 2 Milly had to first file for copyright protection.[92] Further, similar to the Copyright Office's treatment of "The Carlton," the Copyright Office has also refused to register a copyright for the Milly Rock dance on the basis that it is more similar to a social dance intended to be performed by the general public for the public's own enjoyment than a work typically performed by a skilled dancer.[93]

C. Pellegrino

The *Pellegrino* case demonstrates how unsuccessful the alternative claims for relief for copying a dance move are when intellectual property protection for the choreographic work is not available. In *Pellegrino*, yet another person sued Epic Games (Fortnite) for using his Signature Move.[94] Pellegrino's Signature Move is "a series of movements that express his own unique dancing style" utilizing his externally rotatable feet.[95] Epic Games'

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[88] Fourth Estate Pub. Ben. Corp. v. Wall-Street.com, LLC, 139 S. Ct. 881, 891 (2019).

[89] Donahue, *supra* note 86.

[90] Eric Diep, *The "Milly Rock" Remains New York Rap Dance Royalty*, VULTURE (Sept. 18, 2020), https://www.vulture.com/article/milly-rock-explainer.html.

[91] *Rapper 2 Milly accuses Fortnite of stealing his dance moves*, CBS NEWS (Nov. 14, 2018, 1:44 PM), https://www.cbsnews.com/news/rapper-2-milly-accuses-fortnite-of-stealing-his-dance-moves-milly-rock-emote/.

[92] Donahue, *supra* note 86.

[93] Marie-Andrée Weiss, *Copyrighting a dance step? Between a Hard (Milly) Rock and a Copyright Office*, MAW LAW (Feb. 21, 2019), https://www.maw-law.com/copyright/copyright-office-refuses-to-register-milly-rock-dance/.

[94] Pellegrino v. Epic Games, Inc., 451 F. Supp. 3d 373 (E.D. Pa. 2020).

[95] *Id.* at 378.

"Phone It In" emote[96] is entirely identical to Pellegrino's Signature Move.[97] Pellegrino's claims included a violation of his right of publicity and privacy, unjust enrichment, unfair competition, false designation of origin and false endorsement, misappropriation of his trademark, and trademark dilution.[98]

When a plaintiff alleges that an expressive work violates the right of publicity and privacy, the court must look at whether the First Amendment protections afforded to the expressive work outweigh the plaintiff's publicity and privacy rights.[99] In determining whether the First Amendment protections prevail, the court looks at whether the defendant's use of plaintiff's likeness was sufficiently transformative to make the likeness at issue into the defendant's own expression.[100] The court determined that Epic Games' use of Pellegrino's likeness was sufficiently transformative to provide it with First Amendment protections.[101] The court reasoned that the use was transformative because the avatars in Fortnite performing Pellegrino's Signature Move did not share Pellegrino's identity and did not share Pellegrino's occupation.[102]

When a plaintiff makes an unjust enrichment claim, the plaintiff must state facts establishing that benefits were conferred on defendant by plaintiff, appreciation of those benefits by defendant, and acceptance and retention of those benefits under circumstances that would make it inequitable for defendant to retain the benefit without payment of value.[103] The court determined that the unjust enrichment claim failed because Pellegrino did not consent to Epic Games' use of his likeness and Pellegrino thus did not confer a benefit on Epic Games.[104]

In an unfair competition claim, the plaintiff must allege that plaintiff is in competition with the defendant, meaning that the plaintiff and defendant supply similar goods or services.[105] Pellegrino was unable to establish that he

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[96] *See generally,* Anne Friedman et al., *Fortnite, Copyright and the Legal Precedent that Could Still Mean Trouble for Epic Games*, TECHCRUNCH (Mar. 25, 2019), https://techcrunch.com/2019/03/25/fortnite-copyright-and-the-legal-precedent-that-could-still-mean-trouble-for-epic-games/ (explaining that in Fortnite, emotes are dance moves that players buy in the game for their avatars to perform).

[97] *Pellegrino*, 451 F. Supp. 3d at 378.

[98] *Id.* at 380

[99] *Id.*

[100] *Id.* (citing Hart v. Elec. Arts, Inc., 717 F.3d 141, 160 (3d Cir. 2013)).

[101] *Id.* at 381.

[102] *Id.*

[103] *Pellegrino*, 451 F. Supp. 3d at 382 (quoting Boring v. Google Inc., 362 F. App'x 273, 281 (3d Cir. 2010)).

[104] *Id.*

[105] *Id.* at 382-83.

supplied the same services or goods as Epic Games, so this claim failed.[106] To prevail on a false designation of origin claim under the Lanham Act, the plaintiff must establish that the defendant's use of the plaintiff's mark to identify its goods or services is likely to create confusion concerning the origin of the goods or services.[107] The court determined that Pellegrino's claim concerned confusion over the origin of an idea rather than the origin of goods, and thus fell under the Copyright Act, meaning that the claim could not have been brought under the Lanham Act.[108] Thus, this claim failed.

For a plaintiff to prevail on a false endorsement claim, the plaintiff must allege that "the defendant's use of plaintiff's mark to identify its goods or services is likely to create confusion concerning the plaintiff's sponsorship or approval of those goods or services."[109] The court determined that this claim could continue because there was sufficient evidence to conclude that the public associated the move with Pellegrino and Epic Games' use of the move created the false impression that Pellegrino endorsed Fortnite.[110] Pellegrino's misappropriation of trademark claim failed because it was preempted by the Copyright Act.[111] In deciding that the trademark claim was preempted by the Copyright Act, the court concluded that, because the move was alleged to be a dance, the move was "the appropriate subject matter of copyright law."[112] Pellegrino's trademark dilution claim also failed because Epic Games did not make trademark use of Pellegrino's Signature Move.[113] Ultimately, a motion to dismiss was granted on all claims except the false endorsement claim. [114]

D. Brantley

In *Brantley*, Jaylen Brantley and Jared Nickens sued Epic Games for use of their dance move "Running Man."[115] Brantley and Nickens popularized the dance in 2016, and were invited on *The Ellen DeGeneres Show* in 2018 to perform the dance.[116] Plaintiffs brought claims for invasion of the right of

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[106] *Id.* at 383.
[107] *Id.*
[108] *Id.* at 385.
[109] *Pellegrino*, 451 F. Supp. 3d at 385.
[110] *Id.* at 386-87.
[111] *Id.* at 389-90.
[112] *Id.* at 387-88.
[113] *Id.* at 391.
[114] *Id.*
[115] Brantley v. Epic Games, Inc., 463 F. Supp. 3d 616, 618-19 (D. Md. 2020).
[116] Adi Robertson, *Epic is getting sued for putting the "Running Man" dance in Fortnite*, THE VERGE (Feb. 26, 2019, 3:45 PM), https://www.theverge.com/2019/2/26/18241793/epic-fortnite-running-man-dance-

privacy and publicity, unfair competition, unjust enrichment, trademark infringement, trademark dilution, and false designation of origin.[117] There was some dispute as to whether the plaintiffs copied the dance from Instagram and had merely become associated with the dance or had created the dance entirely themselves.[118] The court did not decide whether "Running Man" would be trademarkable, but only whether it fell within the scope of copyright preemption, which is broader than the scope of copyright protection.[119] The court decided that the "Running Man" is within the subject matter of copyright law.[120] However, Epic Games' motion to dismiss was granted in its entirety because, among other reasons, Plaintiffs failed to plausibly allege a valid trademark. [121]

The Epic Games cases have shown that there are multiple procedural issues that must be taken care of first before suing for infringement, such as applying for copyright or trademark protection. When a corporation copies a smaller creator's work, as Epic Games has done, there does not seem to be much protection for the small creator. While there are other claims that can be made when a business copies a smaller creator's work that are related to copyright infringement, these claims are frequently unsuccessful, as seen in the *Pellegrino* case. For there to be equitable copyright protection, copyright law must evolve to protect smaller creators.

III. CURRENT PROTECTION AND CONSEQUENCES OF FUTURE PROTECTION FOR SOCIAL DANCES

There are two interrelated issues that arise from the current intellectual property system: how to protect choreographers of social or short dances and how to protect styles of dance other than ballet, which have historically not been protected. There has been some advancement in copyright law to protect styles of dance other than ballet, which can be seen in JaQuel Knight's successful copyright registrations. However, the choreography in short or social dances, of the type used in Fortnite and on TikTok, are not protectable via copyright registration.[122] The short, social dances on TikTok are not normally in the style of ballet but should still garner copyright protection as a style of choreography. Those dances on social media are similar to JaQuel Knight's choreography style, and copyright law should advance to protect

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copyright-lawsuit-jaylen-brantley-jared-nickens.

[117] *Brantley,* 463 F. Supp. 3d at 618-19.

[118] *Id.* at 619.

[119] *Id.* at 631.

[120] *Id.*

[121] *Id.* at 631-32.

[122] COMPENDIUM (THIRD) supra note 14, at § 805.5(B).

this emerging style of dance. This section looks at whether social dances can be adequately protected under current law and how social dances could be successfully added as copyrightable material.

A. Viability of claims under current law

Social dances on social media, fixed in the tangible medium of a video recording, have some copyright protection even today. Those short videos may be registrable as motion pictures, so the video itself could not be reproduced without infringing on the copyright.[123] However, publicly performing the social dance depicted in the short video would not be an infringement.[124]

The best claim for protection of the choreography in short, social dances that are not eligible for copyright registration, like "The Carlton," seems to be through a claim for violation of the right of publicity and privacy.[125] The right of publicity is an intellectual property right that recognizes the inherent right of every human being to control the commercial use of his or her identity.[126] For a common law right of publicity claim to succeed, the plaintiff must prove "(1) the defendant's use of the plaintiff's identity; (2) the appropriation of plaintiff's name or likeness to defendant's advantage, commercially or otherwise; (3) lack of consent; and (4) resulting injury."[127] The name or likeness element of this claim has been suggested to mean "persona," which includes any attribute, including a unique vocal style, body movement, costume, makeup or distinguishing setting, which alone or in combination can serve to identify the plaintiff.[128]

To determine whether the plaintiff's persona has been appropriated, some scholars have recommended requiring the plaintiff to "demonstrate that his image is identifiable in the defendant's use by more than a de minimis number of people."[129] Using this test, the right of publicity claim would only protect moves that have become associated with a specific person, similar to how "The Carlton" has become associated with Alfonso Ribeiro. Even if the move

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[123] COMPENDIUM (THIRD) supra note 14, at § 805.8(D).

[124] *Id.*

[125] Lauren Hutton-Work, *The Fortnite Lawsuits: A Dance Battle Royale Against Copyright Law's Protections of Choreographic Works*, 21 TEX. REV. ENT. & SPORTS L. 137, 162 (2020).

[126] ETW Corp. v. Jireh Publ'g, Inc., 332 F.3d 915, 928 (6th Cir. 2003).

[127] Eastwood v. Superior Court, 198 Cal. Rptr. 342, 347 (Ct. App. 1983).

[128] Chandler Martin, *Whose Dance Is It Anyway?: Carving Out Protection for Short Dances in the Fast-Paced Digital Era*, 98 N.C.L. REV. 1001, 1021-22 (2020).

[129] *Id.* at 1022.

has become part of the person's persona, as seen in the *Brantley* case,[130] this claim still may not be successful due to Copyright Act preemption.[131] The actual choreographer who created these dances would still be left without protection if the choreographer was not the person who performed the dance.

Granting copyright protection to only the person who has become associated with the work is an even greater issue today. The most recent example has been White TikTok creators copying dances created by Black TikTok creators and profiting and gaining publicity from those dances as if the dances were their own.[132] This practice reached its peak on *The Tonight Show Starring Jimmy Fallon* in March 2021 when Addison Rae (a White TikTok creator) and Jimmy Fallon performed TikTok dances, many of which were originally choreographed by people of color on TikTok.[133] This performance sparked backlash, causing Jimmy Fallon to issue an apology and invite the original creators of those dances on his show.[134] Expanding copyright protection to these shorter social dances would help protect all creators, especially people of color who suffer when White creators recreate and profit off their work.

B. Social dances deserve copyright protection

Copyright law should be expanded to reflect the evolution of choreography that has occurred in part due to social media and the use of viral media platforms promoting short clips of choreography, such as Vine and TikTok. Short social dances should be copyrightable due to the lack of protection for creators that results if they are not copyrightable and to make up for the historical lack of protection for innovative new creators.[135] Below

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[130] 463 F. Supp. 3d at 618-19.

[131] 463 F. Supp. 3d at 626-27; Donahue, *supra* note 86

[132] *See* Natasha Jokic, *Here's Why "The Tonight Show Starring Jimmy Fallon" is Facing Backlash for Its TikTok Dance Segment with Addison Rae,* BUZZFEED (Mar. 28, 2021), https://www.buzzfeed.com/natashajokic1/addison-rae-jimmy-fallon-tiktok-backlash; Tanya Chen, *Black TikTokers who Create Viral Dances are Asking the Platform's Most Popular Teens to Properly Credit Their Work*, BUZZFEED, (June 24, 2020, 5:57 PM), https://www.buzzfeednews.com/article/tanyachen/black-creators-on-tiktok-demanding-proper-dance-credits.

[133] Hannah Yasharoff, *Jimmy Fallon addresses his TikTok dance segment with Addison Rae. Here's why it sparked backlash,* USA TODAY (Mar. 30, 2021, 12:37 PM), https://www.usatoday.com/story/entertainment/tv/2021/03/30/tiktok-dances-why-addison-rae-jimmy-fallon-clip-sparked-backlash/7058920002/.

[134] *Id.*

[135] *See* Grand Upright Music, Ltd v. Warner Bros. Records Inc., 780 F. Supp. 182 (S.D.N.Y. 1991), in which the judge found that a Black artist committed

I discuss how adding copyright protection for social dances would play out in litigation.

1. *De Minimis* and Fair Use Defense

Adding copyright protection for social dances should not result in liability for someone performing a dance at home or at a party. The *de minimis* and fair use defenses would protect these non-commercial uses of the choreography and would ensure the goals of copyright protection were met. *De minimis non curat lex* is a legal maxim that protects people from liability who commit insignificant violations of the rights of others.[136] The *de minimis* defense considers the amount of copyrighted work that was copied and the observability of the copyrighted work in the infringing work.[137] If someone were to perform a copyrighted dance at home or at a party, that performance seems to fall under the *de minimis* defense. Without additional aggravating factors, there would be no benefit to suing that non-commercial performer, and the legal system would be unlikely to concern itself with that insignificant violation. If the performer became associated with the copyrighted dance or began to profit from performing the dance, then the *de minimis* defense would no longer be applicable.

Fair use is a limitation on the exclusive rights to a copyright and protects uses of copyrighted materials for criticism, comment, news reporting, teaching, scholarship, or research.[138] In determining whether the use of a work is fair use, the court considers factors such as (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[139]

The Fair Use Doctrine protects choreographers who create new dances based on only a few steps from a pre-existing dance. The third factor of the fair use defense considers the amount and substantiality of the portion used in relation to the copyrighted work as a whole. If a company were to take a pre-existing dance directly from what the choreographer created, then that would not be protected under the Fair Use Doctrine.

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copyright infringement by sampling music without permission and referred the artist for criminal prosecution, creating a barrier to Hip Hop artists creating music, Hip Hop being the genre commonly associated with sampling.

[136] Ringgold v. Black Entm't TV, Inc., 126 F.3d 70, 74 (2d Cir. 1997).

[137] ECIMOS, LLC v. Carrier Corp., 971 F.3d 616, 629-30 (6th Cir. 2020).

[138] 17 U.S.C. § 107.

[139] *Id.*

The real issue with companies using the choreography of others is in the company profiting from that use, as seen in the Epic Games cases. The first factor of the fair use defense addresses this issue and protects the average non-commercial dancer who performs another's choreography from copyright infringement claims. If that dancer starts profiting from performance of another's choreography through posting videos of the performance on social media and monetization of those videos, then the dancer would not be protected under the fair use defense.

2. Public Domain

Under copyright law, copyright protection lasts from the creation of the copyrightable work until 70 years after the death of the creator.[140] Because social dances are common in and to the general public, it would make sense to limit the number of years for which the social dance is protectable before it enters the public domain. Public domain

> designates things which are owned by "the public"; that is, the entire state or community, and not by any private person. When a thing is common property, so that anyone can make use of it who likes, it is said to be *publici juris;* as in the case of light, air, and public water. [141]

Social dances, which are already prevalent in the community, should be available in the public domain sooner than the choreographic works already protected by copyright. When a dance is so pervasive that it is no longer associated with a single creator and has become a part of culture, it should enter the public domain. Dances like the twist[142] and the grapevine[143] have become a common part of culture over time, due in part to the fact that they are over 40 years old. Those dances have already become common parts of other dances and works, so it would not make sense to copyright those dances now. Those dance moves are already unofficially owned by the public. Social dances are unlike other copyrightable works, like books, plays, or movies, in that they are meant to be performed by the general public. Because they are

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[140] 17 U.S.C. §302(a).

[141] Edward Lee, *The Public Domain: The Evolution of Legal Restraints on the Government's Power to Control Public Access Through Secrecy or Intellectual Property*, 55 HASTINGS L.J. 91, 105 (2003).

[142] *See* Jennifer Rosenberg, *The Twist: A Worldwide Dance Craze in the 1960s*, THOUGHTCO (Sept. 23, 2019), https://www.thoughtco.com/the-twist-dance-craze-1779369 (describing the twist and stating that it was performed as early as 1960).

[143] *See* TROY KINNEY & MARGARET WEST KINNEY, THE DANCE: ITS PLACE IN ART AND LIFE 278 (1914), http://www.gutenberg.org/files/50056/50056-h/50056-h.htm (describing the grapevine as early as 1914).

created to be performed by everyone, if social dances become a copyrightable subject matter, then they should have a shorter duration of copyright protection.

3. Derivative Works

Another argument against granting copyright protection to social dances is that these short dances are the building blocks of larger dances and would thus stifle creativity by preventing other choreographers from creating works incorporating those other moves.[144] There is a substantial difference between the second position in ballet[145] compared to "The Carlton,"[146] which the U.S. Copyright Office both considers to be too simple to warrant copyright protection. Whereas one could accidentally perform the second position in ballet, either in everyday movement or within another dance, performing "The Carlton" requires some level of skill and effort.

Social dances are not likely to be the building blocks of longer dances because they are already full dances. Social dances, by their very name, are already dances. Social dances, like "The Carlton" or "Milly Rock," do not fit in with the rest of the list of moves that are explicitly listed by the U.S. Copyright Office as non-protectable. The U.S. Copyright Office should eliminate social dances from the list of non-protectable dances and grant copyright protection to them.

IV. CONCLUSION

Knight's successful copyrighting of his choreography for Beyoncé demonstrates the progress that has been made in expanding copyright protection for choreographic works to styles of dance other than ballet. Due to the differences between traditional ballet and more modern styles of dance, like hip hop and jazz, more clarity is needed from the legislature and the Copyright Office on what is and what is not copyrightable. The legislature should pass new copyright laws expanding the scope of copyrightable material to reflect the recent developments in social media and dance, thereby ensuring more equitable copyright protection for all creators. Doing so would

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[144] Chandler Martin, *Whose Dance Is It Anyway?: Carving Out Protection for Short Dances in the Fast-Paced Digital Era*, 98 N.C.L. REV. 1001, 1015-1017 (2020).

[145] *See* HowcastArtsRec, *How to Do the 5 Basic Positions | Ballet Dance*, YOUTUBE (Oct. 28, 2011), https://www.youtube.com/watch?v=b3bawTEPLtA (demonstrating this position).

[146] *See* Cridiron, *The Carlton Dance,* YOUTUBE (Aug. 15, 2006), https://www.youtube.com/watch?v=zS1cLOIxsQ8 (demonstrating this choreography).

eliminate the discretion given to Copyright Office specialists in determining, seemingly arbitrarily, what type of choreography is or is not protectable.[147] Expanding copyright protection to different styles of choreography would ideally protect smaller creators from large corporations while protecting people of color from having their creations stolen, like the Jimmy Fallon and Addison Rae instance and the plot of the movie *Bring It On*.

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[147] Hutton-Work, *supra* note 125, at 164.