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Brenda Reddix-Smalls
North Carolina Central University School of Law

INTELLECTUAL PROPERTY, INCOME INEQUALITY, AND SOCIETAL INTERCONNECTIVITY IN THE UNITED STATES: SOCIAL CALCULUS AND THE HISTORICAL DISTRIBUTION OF WEALTH

BRENDA REDDIX-SMALLS[1]

ABSTRACT

Scant attention has been paid to the historical trajectory and effect of the United States' intellectual property regimes—patenting, copyrighting, and trademarking—as devices which implement racialized property grants and further income and social inequality. This article focuses on just that and argues that the United States Constitution was designed as a property-based and economically-driven social compact which identifies intellectual property interests through a racialized lens. From this view, it is further argued that the Intellectual Property Clause, which itself was designed to incentivize invention and innovation, protected the racialized property interests of the governing elites of the newly established government and country. This pattern of property protection extends into the present and continues to result in vast inequalities in personal incomes and social positions, and in our scientific and technological communities.

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1. Professor of Law and Director of the Intellectual Property Institute at North Carolina Central University School of Law. The author would like to thank Kyle Sherard, her research assistant, Alexis White, as well as the staff of the North Carolina Central University Science and Intellectual Property Law Review for their work and diligent scholarship. Finally, this article is the first in a series of three papers examining: 1) the historical trajectory of intellectual property protections in the Constitution of the United States, 2) the wage-income differentials led by the technology driven economy, and 3) the resulting income inequalities in the United States resulting from labor wage deprivations caused by expanding capital aggregations for technological development and capitalisic industry.

I. INTRODUCTION

A drone[2] hovers over a pre-dawn agricultural landscape, assessing the soil and its moisture content. Utilizing its programmed sensors, the drone adjusts and disgorges a thin mist of pesticides, measured and calibrated to that specific moment in time and space, all while calculating wind direction and temperature.[3] Meanwhile, your smart phone, without touch tapping, computes your estimated work commute time based on present and future traffic and weather conditions. The phone announces a lunch appointment scheduled later that afternoon and displays an Instagram photo of the appointment guest. A Nest thermostat,[4] which can detect your presence in any room,

2. Mark Corcoran, *Drone Wars: The Definition Dogfight*, ABC (Feb. 28, 2013), http://www.abc.net.au/news/2013-03-01/drone-wars-the-definition-dogfight/4546598 ("Decades ago a drone was originally defined as a pilotless, radio-controlled military target-towing aircraft. Today "drone" is the popular description for anything that flies without a pilot at the controls, whether it is controlled directly by an operator on the ground or is capable of autonomous flight with no direct human intervention. . . . [A]viation professionals and government regulators . . . [prefer] . . . UAV (Unmanned Aerial Vehicle), also the UAS (Unmanned Aerial System), which is a UAV, plus the ground-based controls.").

3. Molly Simon, *The Move Towards Computing That Reads Your Mind*, N.Y. TIMES, May 7, 2014, at B7.

4. *Best Home Automation System*, CONSUMER REPORTS MAGAZINE, June 2014 (Listing consumer products currently available for sale: Burglar alarm that you can monitor from afar; Generators which

adjusts the temperature as you leave your home.[5] The low energy radio 'presence' tags on your belt loop sends a text to the office that you're leaving home and signals the coffee machine to begin making coffee or dispensing juice.[6] This same system powers Square Wallet,[7] which allows you to walk into the local Starbucks on your way to work and to pay by simply ordering.[8] The radio tag on your body and the tag into the world is a key component of interconnectivity[9] or as some have called it "the Internet of Everything." This predictive sensing[10] component in interconnectivity is not merely joined to convenience tasks. Rather, these predictive sensors utilize algorithms to determine, in advance, whether you are fit for a particular job or employment position.[11]

You arrive at work and gain entrance to the facility after a device affixed to an entryway recognizes you. The device employs facial recognition software and analyzes biometric[12] information to determine who gains access to the space. At work, your current project relies on a microscale 3-D printer,

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update the owner via e-mail or text you; Thermostats that senses patterns in human presence; Lighting controlled through an app; Smoke/CO detectors that can promptly shut off fuel-burning appliances; Electronic door locks that let you remotely lock/unlock and change who's authorized to enter; etc.).

5. *Id.*

6. Bill Wasik, *In The Programmable World, All Our Objects Will Act as One*, WIRED (May 14, 2013), http://www.wired.com/2013/05/internet-of-things-2/ (identifying "'[p]resence' tags—low energy radio IDs that sit on our keychains or belt loops and announce our location, verify our identity—are what let the SmartThings system text your wife or fire up your A/C when you leave the office.").

7. *Id*.

8. *Id*.

9. *Id*. ("In [the] future, the intelligence once locked in our devices now flows into the universe of physical objects. Technologists have struggled to name this emerging phenomenon. Some have called it the Internet of Things or the Internet of Everything or the Industrial Internet—despite the fact that most of these devices aren't actually on the Internet directly but instead communicate through simple wireless protocols. Other observers, paying homage to the stripped-down tech embedded in so many smart devices, are calling it the Sensor Revolution.").

10. *Id*.

11. *See* LUKE DORMEHL, THE FORMULA: HOW ALGORITHMS SOLVE ALL OUR PROBLEMS…AND CREATE MORE (2015); *see also* Luke Dormehl, *Your Web Presence Just Picked Your Next Job*, WIRED (May 26, 2014), http://www.wired.co.uk/article/web-presence-employment (writing about tech firms such as Gild, which uses algorithms to analyze individuals on thousands of different metrics and data points-mining them for insights in what Gild refers to as "broad predictive modeling," and Saber that devises a questionnaire and uses an algorithm to come up with a pair wise score which predicts how well a prospective employee will fit in and a behavior chart for a spreadsheet of behaviors for a company.).

12. *See* SCHMIDT & COHEN, *infra* note 38. Biometrics information refers to information that can be used to uniquely identify individuals through their physical and biological attributes. Fingerprinting, photographs, and DNA are all biometrics. Voice recognition and facial recognition software will likely surpass these earlier forms.

"The facial-recognition systems of today use a camera to zoom in on an individual's eyes, mouth and nose, and extract a 'feature vector,' which is a set of numbers that describes key aspects of the image, such as the precise distance between the eyes…Those numbers can be fed back into a large database of faces in search of a match. A team at Carnegie Mellon demonstrated in a 2011 study that the combination of 'off-the-shelf' facial-recognition software and publicly available online data can match a large number of faces very quickly, thanks to…cloud computing." *Id.* at 77-78.

which uses ink made from various synthetic and biological materials.[13] The printer's product output employs layers of artificial cells to create human organ tissue with layers, where each layer responds separately to environmental climatic fluctuations.[14]

After work, you indulge in your passion for writing music. You create original songs and melodies and use computer software applications[15] to score these compositions. compositions. Unfortunately, when you sell your compositions, the contract for sale to a music company appears to allow the producer to co-own these songs in perpetuity.

But in a way, this does not even matter—the total payoff amount for the million-plus plays you have on Spotify[16] amounts to less than eight cents per play.[17] The song can be played on Spotify, Tidal,[18] Apple Music[19] or any number of expanding music streaming services owned by tech companies. Much like the temperature of your home, all of these streaming services can be activated merely by entering a room. Although the music and the lyrics are original, the beats[20] were purchased from a digital site, the technical "know-how"[21] acquired at work, and the signed contract allowed for

13. David Rotman, *Microscale 3-D Printing*, 117 MIT TECH. REV. 38 (reporting on a 3-D printer that uses multiple materials to create objects such as biological tissue and blood vessels; it could make biological materials with desired functions that could lead to artificial organs and novel cyborg parts).

14. *Id*.

15. NAT'L RESEARCH COUNCIL OF THE NAT'L ACADEMIES, COPYRIGHT IN THE DIGITAL ERA: BUILDING EVIDENCE FOR POLICY (Stephen A. Merrill & William J. Raduchel eds., 2013) (discussing new uses for digital electronics and policy implications for technology changes.); *see* SIBELIUS, www.sibelius.com (last visited October 11, 2017) (A musical notation software); FINALE, www.finalemusic.com (last visited October 11, 2017) (software to score music for music authors).

16. SPOTIFY, https://www.spotify.com (last visited October 11, 2017) (A digital music service that gives you access to music via streaming internet; reputed to carry over sixty million songs.).

17. *See* David Lowery, *My Song Got Played on Pandora 1 Million Times and All I Got Was $16.89, Less Than What I Make From a Single T-Shirt Sale*, THE TRICHORDIST (June 24, 2013), http://thetrichordist.com/2013/06/24/my-song-got-played-on-pandora-1-million-times-and-all-i-got-was-16-89-less-than-what-i-make-from-a-single-t-shirt-sale/ (noting that Internet radio and streaming services pay a different amount of royalties to copyright owners then terrestrial radio stations, and that there is a dispute about the fairness of royalties paid to musicians in a contrast with what musicians are paid per play on terrestrial radio stations).

18. TIDAL, https://support.tidal.com/hc/en-us/articles/202992312-About-TIDAL (last visited November 19, 2017) (A global music and entertainment platform that brings artists and fans together through unique music and content experiences and is currently available in 52 countries.).

19. APPLE MUSIC, https://www.apple.com/music/ (last visited November 19, 2017) (A digital streaming services similar to Spotify and Tidal).

20. Beats are digital sounds engineered to accompany a wide variety of musical forms such as rap, hip-hop, funk, indie, rock and roll, and country.

21. This term refers to skills and professional competencies utilized by the employee to produce, prepare, or complete work gained from information accumulated in the workplace (written or oral), compiled by the employer, or gained from on-the-job experience with a particular technical product, process, or production. *See*, *Know-how*, DICTIONARY.COM, http://dictionary.reference.com/browse/know-how (last visited October 11, 2017).

distribution on a streaming[22] network. This creates uncertainty as to the question of ownership.[23]

The issue of partial ownership of music may seem unrelated to the field where, earlier, the drone dispensed the pesticide. However, they are far more relatable that one may imagine. The patented[24] seeds[25] planted by the farmer are owned by an agribusiness company. As such, the farmer cannot sell or distribute the seeds, or use them in any manner outside of direct consumption after harvesting the crops.[26] Nor can he graft or create a new species using

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22. Joshua Keesan, *Let It Be? The Challenges of Using Old Definitions for Online Music Practices*, 23 BERKELEY TECH. L.J. 353, 359 (2008) (explaining that streaming is the interactive and the non-interactive digital transmission of music); *id.* at 353 ("The intellectual property rights attached to music have always been complex because every song actually contains two separate protectable works: the underlying musical composition and the sound recording. Consequently, various separate and distinct rights organizations have formed to collect royalties and licensing fees for each of the rights embodied in a single song. These organizations formed with generally shared understandings of the various ways music could be used and the rights that those uses implicated. As the Internet becomes music's primary medium, however, new uses have arisen for which the old definitions do not so directly apply.").

23. Copyright Act, 17 U.S.C. §§ 101-1332 (2012) (providing copyright protection "in original works of authorship fixed in any tangible medium of expression" for the life of the author plus seventy years). This protection prevents any reproduction, distribution, public performance, public display or creation of derivative works unauthorized by the author. *Id*. Copyright Act, 17 U.S.C. § 201(a) (2012) outlines the extent to which copyright vests in the author or authors of the work. The owner of the rights, either individually or collectively, has the right under § 201(d) of the Act to transfer any or all of the exclusive rights codified in § 106. H.R. REP. NO. 94-1476, at 123 (1976). Copyright ownership by a sole individual is fairly straightforward, however, where works of authorship are created pursuant to (1) employment or (2) the collaborative efforts of individuals (joint works), the Copyright Act provides separate governing principles for ownership. 17 U.S.C. § 101 (2012) and § 201(b) (where the initial ownership vests in the employer, the employer is considered by law the author of the work); *see also*, 17 U.S.C. § 101 (defining "joint works" as "a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole.").

24. America Invents Act, 35 U.S.C. §§ 1-376 (granting inventors exclusive rights, to exclude others from the use, sell, making, or offering for sale any of the invention covered in the patent claims).

25. *See* Daryl Lim, *Self-Replicating Technologies and The Challenge for The Patent and Antitrust Laws*, 32 CARDOZO ARTS & ENT. L.J. 131, 133 (2013) ("Few patented inventions challenge the traditional boundaries of the antitrust laws like those capable of multiplying."). Inventions capable of multiplying are called self-replicating technologies (SRT). *Id.* These inventions are embedded in vaccines, computer codes and seeds. Plants and plant parts became eligible for utility patents, "setting the stage for problems of farmers seeding, saving and breeding seeds as form of patent infringement." *Id*. at 148. Agri-businesses such as Monsanto license its Roundup Ready Gene to seed companies. The seed companies, which utilize the improved herbicide and weed repellent technology from Monsanto, insert Roundup into the germ plasm of their own seed. The seed companies execute a license to the farmers. The seed companies are restricted by Monsanto to only selling the seeds to farmers licensed by Monsanto. *Id*.

26. *Bowman v. Monsanto Co.*, 133 S. Ct. 1761, 1769 (2013) (holding that buying legitimately sold seed did not confer on Bowman the right to replant and make new seeds without Monsanto's permission). Bowman was allowed to "resell the patented soybeans he purchased from the grain elevator; so too he could consume the beans himself or feed them to his animals." Bowman could not make additional patented soybeans without Monsanto's permission. *Id*. at 1766

the seeds from the next crop,[27] even though diversity of plant species has been a hallmark of evolution and food distribution for centuries.[28]

All of the described technologies currently exist and are protected by intellectual property[29] laws. Scholars, professors and even justices of the Supreme Court have written about the dangers of interconnectivity and privacy on our private lives.[30] Yet, insufficient study has been directed toward the hazards posed therein, and the resulting wealth-income inequality[31] divide that is, itself, exacerbated by interconnectivity and intellectual property laws.

This Article reviews (1) the foundational history of intellectual property laws in the United States by examining the inception, process, and function of patents, trademarks and copyrights; (2) the persisting income inequality created by slavery's embedded position in the Constitution;[32] and (3) the

27. *Id*. at 1766.

28. Lim, *supra* note 25, at 159 ("At its core the judgment sought to ensure that Monsanto's inventive concept was adequately protected against unjustified free-riding."). The author argues that the court seemed to 'be carving out judicial exceptions for SRTs.'

29. *See* U.S. CONST. art. I, § 8, cl. 8; 35 U.S.C. §§ 1-376 (2012) (explaining that patents allow inventors to exclude others for a specified period of time from making, using, selling and offering for sale any invention covered by the patent); 17 U.S.C. §§ 101-1332 (2012) (explaining that copyrights provide for protection for 'original works of authorship fixed in any tangible medium of expression' for the life of the author plus 70 years, against unauthorized copying, distribution, public performance, public display or the creation of derivative works); 15 U.S.C. §§ 1051-1141 (2012) (explaining that trademarks, the Lanham Act, state statutes, and judicial precedents provide protection for "any word, name, symbol, or device or any combination thereof" that can be used to identify the source of products or services. Protections are provided for words, letters, drawings, objects, product shapes and packaging. Congressional authority to protect trademarks is derived from the Commerce Clause: "The Congress shall have power . . . [t]o regulate Commerce with foreign Nations, and among the several states, and with the Indian Tribes . . . ." Collectively, these statutory rights together with trade secrets, comprise what is euphemistically referred to as "intellectual property.").

30. *See Katz v. United States*, 389 U.S. 347, 360-61 (1967); John Edward Campbell & Matt Carlson, *Penopticon.com: Online Surveillance and the Co-modification of Privacy*, 46 J. BROAD. & ELEC. MEDIA 586, 588 (2002); Chris Jay Hoofnagle, *Big Brother's Little Helpers: How ChoicePoint and Other Commercial Data Brokers Collect and Package Your Data for Law Enforcement*, 29 N.C.J. INT'L L. & COM. REG. 595, 595-96 (2004); *see, e.g.*, Jack M. Balkin, Essay, *The Constitution in the National Surveillance State*, 93 MINN. L. REV. 1 (2009); *cf.* Siobhan Gorman*, NSA's Domestic Spying Grows As Agency Sweeps Up Data,* WALL ST. J. (Mar. 10, 2008), https://www.wsj.com/articles/SB120511973377523845) (describing the NSA's monitoring of a wide range of personal data from credit card transactions and e mail to Internet searches and travel records, as well as "an ad-hoc collection of so-called 'black programs' whose existence is undisclosed . . . ."). Innovative advances in data collection, data mining technology, fueled by intellectual property protections have created serious issues concerning privacy for citizens; *see* Danielle Keats Citron, *Reservoirs of Danger: The Evolution of Public and Private Law at the Dawn of the Information Age*, 80 S. CAL. L. REV. 241, 246-48 (2007).

31. *See* THOMAS PIKETTY, CAPITAL IN THE TWENTY-FIRST CENTURY 242 (Arthur Goldhammer trans., 2014) ("By definition, in all societies, income inequality is the result of adding up these two components: inequality of income from labor and inequality of income from capital. The more unequally distributed each of these two components is, the greater the total inequality.").

32. U.S. CONST. art. I, § 8, cl. 8, Intellectual Property Clause.

correlation between intellectual property laws, interconnectivity,[33] and social and wealth inequality.

II. INCOME INEQUALITY AND THE UNITED STATES' INTELLECTUAL PROPERTY REGIME

A review of the historical underpinnings of the United States intellectual property (IP) laws reveals startling past and present inequities.[34] IP laws are themselves rooted in incentivizing[35] and promoting innovation[36] and capital aggregation[37] to protect property.[38] A cursory reading of modern academic and constitutional analysis reveals that technological innovation and economic development in the United States are the product of maximalist intellectual property protections.[39] This quest to control capital—namely in the

33. The author uses the word "interconnectivity" throughout this article to describe the connections that exist between digital platforms, big tech, and our daily lives through the use of smart home technology, driverless cars, and smartphones.

34. This article argues that the development of the U.S. Intellectual Property laws favored property owners, the effects of which ripple into the present by way of unequal access to IP resources. *See* Simone A. Rose, *The Supreme Court and Patents: Moving Toward a Postmodern Vision of "Progress"?*, 23 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1197 (2013); Dotan Oliar, *Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress's Intellectual Property Power*, 94 GEO. L.J. 1771, 1805-06 (2006).

35. Birgitte Andersen, *If 'Intellectual Property Rights' is The Answer, What is The Question? Revisiting the Patent Controversies*, *in* INTELLECTUAL PROPERTY RIGHTS 109, 115 (Birgitte Andersen ed., 2006) ("According to the moral rationale of IPRs, justice requires that society compensate and reward its people for their services in proportion to what they cost and how useful they are to society. However, I would assert that it is very unlikely that the economic or money value (reflected in the reward system) of the idea is entirely created by the inventor.").

36. *Id*. at 117 ("The basic proposition of utilitarian classical economists (including Jeremy Bentham [1748-1832], Adam Smith [1723-1790], Jean-Baptiste Say [1767-1832], John Stuart Mill [1806-1873] and John Bates Clark [1847-1938]) is that, as IPRs provide 'the prospect of reward', this in turn encourages creative and technological advance by providing increased incentives to invest in invention and further develop new ideas, and that without such incentives the invention inducement would be weakened.").

37. *Id.* at 152 (arguing that the possible reasons to take out patents include: (1) protecting against imitation, (2) establish legal basis for cooperation, (3) patents as strategic signals, and (4) patents as indicators of value).

38. *See* Frank D. Prager, *Historic Background and Foundation of American Patent Law,* 5 AM J. LEGAL HIST. 309, 309 (1961) ("The American Revolution . . . brought a sweeping reorientation of patent law, with new forms, new rules, new concepts, and new ideals."); *id.* at 318 ("This also was the first act which can be held to imply and confirm the decision that intellectual property attaches to intellectual creation according to preexisting right and law."); *Cf.* ERIC SCHMIDT & JARED COHEN, THE NEW DIGITAL AGE: RESHAPING THE FUTURE OF PEOPLE, NATIONS AND BUSINESS (Alfred A. Knopf ed., 2013); Karl Fenning, *The Origin of the Patent and Copyright Clause of the Constitution*, 11 J. PAT. OFF. SOC'Y. 438 (1929).

39. Lee N. Davis, *Why do small high-tech firms take out patents, and why not?*, *in* INTELLECTUAL PROPERTY RIGHTS 148, 150 (Birgitte Andersen ed., 2006) ("Literature on the economics of the patent system (for example, Andersen, 2004, Granstrand, 1999) comprises three approaches . . . [including] . . . empirical studies of patent effectiveness and importance (for example, Cohen *et. al*. 2000, Harabi, 1995, Levin *et al*., 1987, Mansfield *et al*., 1981)."); *see also* Zvi Griliches, Ariel Pakes & Bronwyn H. Hall, *The Value of Patents as Indicators of Inventive Activity* (Nat'l Bureau of Econ. Research, Working Paper No. 2083, 1986) (using a large database of publicly traded U.S. manufacturing companies from the 1960s to the 1980s, coupled with data from the U.S. Patent Office, to conclude that patent data represents a valuable

form of currency—subsumes privacy protections, diminishes the public domain, and stymies creativity by removing valuable cultural[40] incentives to develop and express through invention and artistry.[41] However, in securing such protections, this operational system produces a vast network of income inequalities which overwhelmingly come at the expense of minority populations, laborers, and the working class.[42] It was through the introduction of race into the foundation of patent law[43] that created a racialized legal format which was born to protect property and property interests. Race was present at the creation of the nation and continues to contribute to the widening income inequalities of today and tomorrow.

A. The Historical Paradigm: Protecting Intellectual Property Interests in the United States

Current United States intellectual property laws are the direct result of a social compact—the Constitution—which was purportedly designed to balance the protection of liberty rights and property interests.[44] This new

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resource for the analysis of technological change); *id.* at Abstract ("It is possible also to use a firm's distribution of patenting by field to infer its position in 'technological space' and use it in turn to study how R&D spills from one firm to another."); *see also* Nicolas Suzor, *Access, Progress, and Fairness: Rethinking Exclusivity In Copyright*, 15 VAND. J. ENT. & TECH. L. 297, 298 (2013) ("The standard justification for copyright is that it is a utilitarian balance between providing incentives to the creative industries to invest in cultural production on the one hand, and encouraging access to and use of those works on the other. Copyright does this by providing exclusive rights over expression in order to allow copyright owners to recoup their costs of production.").

40. DEBORAH J. HALBERT, THE STATE OF COPYRIGHT: THE COMPLEX RELATIONSHIPS OF CULTURAL CREATION IN A GLOBALIZED WORLD 10 (2014) ("The political economy of culture as intellectual property is important to understand because concerns about cultural heritage, cultural creation, and democratic processes surrounding access and ownership are real when the predominate global model of protection is via private property rights and corporate control.").

41. *Id*.

42. MARK A. MARTINEZ, THE MYTH OF THE FREE MARKET: THE ROLE OF THE STATE IN A CAPITALIST ECONOMY 20 (2009) ("Still the scope and complexity of modern markets have helped muzzle the democratic impulse. Offered the prospect of fabulous wealth and cheaper goods, the average citizen is not only increasingly loathe to question wealth-creating activities but is also increasingly incapable of doing so.").

43. *See* Jonathan Khan, *Race-ing Patents/Patenting Race: An Emerging Political Geography of Intellectual Property in Biotechnology*, 92 IOWA L. REV. 353 (2007) (discussing "the unstated white norm in biomedicine" and "the rise of racial patents" as examples of racialized patents); *see also* Lisa D. Cook, *Violence and Economic Activity: Evidence from African American Patents,1870–1940,* 19 J. ECON. GROWTH 221 (2014) for a discussion on violence in patents (asserting that violent acts caused a drop in patenting of 1,110 patents during this period and that patents declined in response to major riots and discriminatory policies and laws, including segregation and apartheid type policies in the United States. The barriers to innovation, which have been extensively studied, do address the inability of different groups to access the gateways to patenting. Cook's analysis is one of the few studies to address the effect of ethnic and racial oppression on the level, and quality of invention and economic growth).

44. TERRY BOUTON, TAMING DEMOCRACY: "THE PEOPLE," THE FOUNDERS, AND THE TROUBLED ENDING OF THE AMERICAN REVOLUTION 7 (2007) ("Not everyone agreed on how much the political system should be opened, the degree of wealth equality needed to protect liberty, or the virtue (or morality) of using violence to bring political change. But by 1776, there was general consensus around a broad set

Constitution, created by the failure of the post-revolutionary war states to adequately safeguard the interests of the colonial populace,[45] provided much needed protections for property interests.[46] It enshrined liberty and created the protections from governmental intrusions on the right to own, create, and possess property.[47] These provisions did not apply equally. Rather, from their creation, these protections were fit only for exercise by a relatively small body of propertied elites.[48] Since its creation, the Constitution's intellectual property regime has preserved the liberty interests of these few to the exclusion of the masses. This resulted in the outright denial of participation in economic growth and opportunity for generations.

Following the Revolutionary War, the colonial states sought to form protections from internecine warfare,[49] aggression from foreign nations,[50] and economic failure.[51] These and other critical issues facing the new confederate nation became an impetus for drafting of the new United States

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of democratic values that most people believed were central to the Revolution."); s*ee also* Tyler T. Ochoa & Mark Rose, *The Anti-Monopoly Origins of the Patent and Copyright Clause*, 84 J. PAT & TRADEMARK OFF. SOC'Y 909, 919 (2002) ("The History of copyright in the United States bears many similarities to the history of copyright in England prior to the Revolution. In America, as in England, proponents of the natural right view of copyright repeatedly sought a perpetual copyright; in America, as in England, the term of copyright was instead strictly limited in order to serve the public interest; and in America, as in England, it took an authoritative decision by the highest court in the land to firmly establish the utilitarian rationale as the dominant rationale for copyright.").

45. BOUTON, *supra* note 44, at 176 ("Perhaps the most important element of this attempt to scale back democracy was [the] replacing [of] the Articles of Confederation with a new federal Constitution in 1787."). Bouton opines that the push for the Constitution was based in part on the belief that state governments in the new nation had been too democratic. *But see* Edward C. Walterscheid, *Charting a Novel Course: The Creation of the Patent Act of 1790*, 25 AIPLA Q.J. 445, 447 (1997) ("The first federal Congress faced a daunting set of tasks when it convened on March 4, 1789. Not only did it have to establish the statutory frame of governance for the new federal government but it also had to commence the creation of new federal substantive and procedural law. It had to do this within both the specific grants of authority and restrictions imposed upon it by the Constitution.").

46. BOUTON, *supra* note 44, at 7.

47. *Id.* at 13.

48. *Id*. at 177; *see id*. at 7.

49. *The Making of the United States Constitution*, THE LEHRMAN INSTITUTE, http://lehrmaninstitute.org/history/constitution.asp ("The Constitutional Convention of 1787 was a tacit admission of America's governmental weakness. Historian Gordon S. Wood observed: 'By the middle eighties Congress had virtually ceased trying to govern.' Historian Darren Staloff wrote: 'It was not simply its lack of revenue that weakened the American position abroad; Congress also lacked the authority to regulate trade. Instead, each state was left to pass its own tariffs and restrictions. Such a chaotic and weak position invited mercantile aggression from the powerful, centrally governed nation-states of Europe.'").

50. *Id*.

51. *Id*.

Constitution,[52] which included[53] the constitutional foundations for intellectual property laws. These rudimentary protections for intellectual property in the original U.S. Constitution[54] provides the framework for the current IP regime,[55] and forms the basis for understanding the income inequality that persists today.

B. The Constitution: A Social Compact

The U.S. Constitution, ratified in 1788, created a federal union, purportedly protective of liberty interests, property interests, and economic expansion. However, because it was designed to protect the liberty and property interests of the elite class while simultaneously protecting the institution of human slavery,[56] the U.S. Constitution and its embedded intellectual property clause fortified the original income inequality divide in the United States.[57]

Slavery, the ultimate capital aggregation at the expense of labor,[58] was among the most volatile issues contributing to the strained relations between Britain and the American British Colonies during the Revolutionary War.[59]

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52. *Id*. ("McDonald wrote that 'By the winter of 1786-1787 the American republic was in peril, and the institutional safeguards for liberty and property that had been erected had proved inadequate.…Historian Woody Holton wrote: The wave of insurrections [more specifically Shay's Rebellion] and threats that swept over the United States during the 1780s and more important, the relief legislation that the rebels managed to extract from lawmakers and local officials, convinced many of the nation's most prominent citizens that the time had come to launch a rebellion of their own.'"); *see also*, NOTES OF DEBATES IN THE FEDERAL CONVENTION OF 1787 REPORTED BY JAMES MADISON 4 (1966) (James Madison cited the loss of national dignity, interest, and revenue and the want of uniformity in the laws concerning naturalization & literary property as some of the weaknesses exhibited by the then existing post war confederation of states).

53. U.S. CONST. art I, § 8, cl. 8.

54. Rose, *supra* note 34, at 1199 ("In drafting the U.S. constitution, the Founding Fathers took the time to consider what role the federal government should have in protecting writings and inventions created in the United States. Although many Framers had concerns about the anti competitive effect of monopolies, in the end, they were persuaded by the Madisonian view that federal intellectual property protection was needed to promote both economic and overall societal 'progress.'").

55. *Id*.

56. *See infra*, GEORGE WILLIAM VAN CLEVE, A SLAVEHOLDERS UNION, SLAVERY, POLITICS AND THE CONSTITUTION IN THE EARLY AMERICAN REPUBLIC, 179 (Chicago: University of Chicago Press, 446th ed. 2010).

57. DAVID WALDSTREICHER, SLAVERY'S CONSTITUTION 19 (2009) ("The debate and compromises over slavery played a central part in the creation of the U.S. Constitution, shaping the character and nature of the government it formed.").

58. PIKETTY, *supra* note 31.

59. VAN CLEVE, *supra* note 56, at 20 ("The institution of slavery had a prominent place in the economic and political affairs of the British Empire and its mainland American colonies . . . ."); *id.* at 20 ("During the seventeenth and eighteenth centuries, these goals led the Crown to protect slavery by disallowing several American colonial efforts to limit slave imports; by carefully regulating and controlling the classification of slaves as particular types of property in different colonies; and by approving brutal, repressive colonial slavery laws that minimized the cost of slaveholding."); s*ee also*, *Somerset v. Stewart*, 98 E.R. 499 (1772); 20 Howell's State Trials 1, 79-82; 98 Eng Rep 499-510 (King's Bench, 22 June 1772) (A dispute over slavery in England, challenging slavery's legality in England) denounced by American lawyers, such as Thomas Jefferson for judicial activism).

This same strain would later affect the creation of the U.S. Constitution.[60] Slavery[61] in the United States created a divisive wealth inequality and an inter-generational income divide. This rift was exacerbated by the intellectual property laws.[62] These laws sprang from an historic Anglo background and English common law, which served for centuries to protect property interests.[63] Intellectual property, like all property interests, was better protected than liberty interests for a significant segment of the population, as dictated by the constitution;[64] until the ratification of the Bill of Rights and its attendant individual liberties.[65]

All of the laws and the judicial interpretations, including the intellectual property clause and its resulting legislative progeny,[66] were designed to favor

60. VAN CLEVE, *supra* note 56, at 138 ("Despite various antislavery attacks on the Constitution during ratification, in the final analysis, nowhere in the Northern ratification debates can one find any indication that any significant number of convention delegates voted against the Constitution because it recognized the legitimacy of owning slave property, or because they objected in principle to a constitution that based representation on any principle other than free population. Most ratifying convention delegates seem to have understood and accepted the representation provisions as a pragmatic compromise that incorporated slave property wealth. They did not see the inclusion of slave property in the representation formula as a matter of political or moral principle.").

61. VAN CLEVE, *supra* note 56, at 11 (asserting that "[s]lavery is commonly described as a legal or economic system that treats slaves as property"; slavery is "an institution . . . that as [a] law and custom . . . played a central role in major slave states, but also . . . its cohesion was such that its supporters consistently had the ability to call forth the unified political power of those states to protect it from political challenge.").

62. *See* RUTH TOWSE, CREATIVITY, INCENTIVE AND REWARD: AN ECONOMIC ANALYSIS OF COPYRIGHT AND CULTURE IN THE INFORMATION AGE 132 (2001) (explaining that copyright as it exists supports asymmetry in market power between professional artists and producers and fails to adequately award the common artists).

63. Ochoa & Rose, *supra* note 44; *see also*, Walterscheid, *supra* note 45, at 448-49 ("To understand the origins of the first United States patent statute, it is first necessary to recognize that it was not cut from whole cloth. While the Continental Congress, operating under the Articles of Confederation, had not issued patents or enacted any patent legislation, there was nonetheless a patent custom extant in both the infant United States and in Great Britain. At the time the United States transitioned to the federal form of government, the patenting of inventions had been practiced for several centuries. Indeed, the legal form of letters patent, at least in the English context, was not only time-honored but timeworn.").

64. JAMES OLIVER HORTON & LOIS E. HORTON, SLAVERY AND PUBLIC HISTORY: THE TOUGH STUFF OF AMERICAN MEMORY 38 (Horton & Horton eds., 2006). ("Those who are taxed without their own consent, expressed by themselves or their representatives, are slaves." Boston's Josiah Quincy agreed, "I speak it with shame-I speak it with indignation-WE ARE SLAVES." This was the justification offered for resisting British imposed taxes, for refusing to submit to British trade restrictions on American shipping, and finally for taking up arms to remove America from the British Empire." Horton opines that the impetus behind the Revolutionary War and the Declaration of Independence was to protect the colonists from the oppressive takings by the British Crown of their property interests).

65. Gregory E. Maggs & Peter J. Smith, Constitutional Law: A Contemporary Approach 12 (2011). "The Constitution now contains 27 amendments. The first 10 amendments, commonly called the Bill of Rights, protect a large number of individual rights. Amendments 13 through 15 are known as the 'Civil War Era Amendments' or the Reconstruction Amendments because they were passed at the end of the Civil war during the process of Reconstruction. They abolished slavery, bar states from denying equal protection of the laws or due process of the law to any person and protect voting rights."

66. Copyright Act of May 31, 1790, ch. 15, 1 Stat. 124 (first copyright act) (repealed 1831); Revised and replaced by the Copyright Act of 1831.

capital acquisition at the expense of free labor at their inception. The corollary judicial interpretations,[67] of and about labor, engendered a constant tug of war on the use of the intellectual property laws to both incentivize creation and award the creators for their efforts.[68] These laws should be utilized to incentivize creation, protect the work products of inventors and creators, replenish the public domain, and promote the progress of arts and science.[69] But based on a failure to address the income inequality factor, the laws and their effects keep the pubic mired in recurring struggles over the true meaning of the phrase "to promote the progress of arts and science." Principally, this is because large stakeholders in intellectual property industries remain constantly vigilant in their effort to control and craft a legal regime that benefits the wealthy.[70]

III. INTELLECTUAL PROPERTY: COPYRIGHTS, PATENTS AND TRADEMARKS

Products of the mind, known as informational products, are protected under a set of laws known variously as "intellectual property" laws.[71] These laws have gained an increasingly significant impact on the lives of U.S. citizens and our national economy.[72] The reach of these laws is global, affecting citizens of the world and their own domestic economies. As technological knowledge has developed, and corporate entities have amassed vast information, corporate contributions to the production of consumer products has increased; as a result of this connection, intellectual property law has an increasingly larger impact on current world economies.[73]

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67. *See* Dred Scott v. Sandford, 60 U.S. 393 (1857); Missouri Compromise, Civil Rights Cases, 109 U.S. 3 (1883); *In re* Trade-Mark Cases, 100 U.S. 82 (1879); Plessy v. Ferguson, 163 U.S. 537 (1896).

68. One group of scholars argues that the laws are designed to encourage creation, which will ultimately enrich and benefit the public commons. The other theorists believe that the IP laws are created to enrich the creators of the creations.

69. U.S. CONST. art. I, § 8, cl. 8.

70. *See* Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 311-12 (1989); *see also* COHEN, *infra* note 72, at 32 ("[N]o study of modern copyright law would be complete without consideration of the economic and political roles of the copyright industries and the resulting effects on copyright law and policy. As information and entertainment goods have assumed increasing importance with the United States and global economies, the industries that produce and disseminate those goods have grown correspondingly. It should come as no surprise, then, that those industries wield considerable political power, both domestically and in international trade matters.").

71. MARSHALL LEAFFER, UNDERSTANDING COPYRIGHT LAW (4th ed., 2005) (identifying intellectual property laws: Patents, copyrights, trademarks, and trade secrets).

72. JULIE E. COHEN, LYDIA PALLAS LOREN, RUTH GANA OKEDIJI, & MAUREEN A. O'ROURKE, COPYRIGHT IN A GLOBAL INFORMATION ECONOMY (3d ed., 2010); *Copyright in the Digital Era*, *supra* note 19 (reporting the increasing importance of intellectual property on global trade, international law, and globalism in the marketplace).

73. GHOSH ET AL., INTELLECTUAL PROPERTY: PRIVATE RIGHTS, THE PUBLIC INTEREST, AND THE REGULATION OF CREATIVE ACTIVITY 1 (3D ED. 2007) ("In the last century, as more human activity has moved towards the development of knowledge and the accumulation of valuable information has

The majority of intellectual property laws in the United States are derived from the U.S. Constitution, which states: "Congress shall have the power…To promote the Progress of Science and useful Arts, by securing for limited times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[74] This clause, Art I, § 8, cl. 8, known as the Copyright and Patent Clause, (IP clause), was one of the few clauses enumerating an express grant of power for Congress to be adopted without debate in the Constitutional Congress.[75]

A constitutional grant of power, Art. I, § 8, cl. 8, authorizes Congress to legislate federal statutory provisions, such as the America Invents Act (patents; for innovative technology,[76] and the Copyright Act of 1976 (and its amendments),[77] the Digital Millennium Copyright Act and Circumvention of Technological protections[78] (copyrights). Unfortunately, insignificant research has been directed towards the historical significance of the original IP clause and its placement in the pro-slavery Constitution.[79]

Originally operating to protect the interests of the property owners, and therefore slave holders,[80] these intellectual property laws survive with a property utilitarian paradigm in ways that often adversely impact the consumer, and/or exhibit a racialized effect.[81]

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produced critically important resources and assets in many industries and economies, intellectual property law has become increasingly prominent.").

74. U.S. CONST. art. I, § 8, cl. 8.

75. U.S. CONST. art. I, § 8; *M'Culloch v. Maryland*, 17 U.S. 316, 405 (1819) (The Federal Government is acknowledged by all, to be one of enumerated powers.); *see also* Richard Primus, *The Gibbons Fallacy*, 19 U. Pa. J. Const. L. 567, 568 (2017) ("That axiom, which we can call the *enumeration principle*, is a fundamental creed of American constitutional law.""").

76. Leahy-Smith America Invents Act, 35 U.S.C. §§ 1-37 (2011).

77. H.R. Rep. No. 94-1976, 94th Cong. 2d Sess (1976).

78. Copyrights, 17 U.S.C. §§ 1201(a)(1)-1201(a)(2) (1976).

79. With the exception of James Madison in The Federalist No. 43, there remains very little historical discussion of the adoption of the Copyright and Patent Clause. *See* Edward C. Walterscheid, *To Promote the Progress of Useful Arts: American Patent Law and Administration*, 1787-1836 (Part 2), 80 J. PAT. & TRADEMARK OFF. SOC'Y 11, ("In the early years after the Constitution was ratified, there was some confusion engendered by one of the delegates, Charles Pinckney, as to whether the South Carolina Plan had in fact contained a proposal to grant Congress the authority" to grant exclusive rights to authors and inventors. "Little has been written on the point. The reason for the dearth of commentary is undoubtedly the fact that so little is actually known about how its inclusion came about. Contemporaneous records such as Madison' notes indicate that it was adopted without debate.").

80. *See* THE FEDERALIST NO. 54 (James Madison) ("Slaves are considered as property, not as persons.").

81. *See* Olufunmilayo B. Arewa, *Blues Lives: Promise and Perils of Musical Copyright*, 27 CARDOZO ARTS & ENT. L.J. 573, 596-618 (2010) (citing the racialized and discriminatory effect of copyright laws on music formed out of the African American experience, blues, jazz and rap).

A. Patents

Patents protect new and useful inventions. A grant to the inventor, derived from the Constitution and codified under 35 U.S.C., the patent laws are incentive based code provisions: to invent, to disclose and to risk capital.[82] "Under the patent system, inventors obtain the legal right to exclude others from making, selling or using a new product for a given period."[83] In exchange for this right the inventor agrees to disclose the invention in the patent document. Ostensibly, others are then free to access and use this knowledge to encourage technological innovations.[84]

Many patent historians believe that the adoption of the Patent and Copyright Clause without debate meant that the drafters uniformly agreed upon its premise. However, other interpretations have also been offered to explain the absence of debate:

> It was agreed to by the delegates on September 5, 1787 after several months of intense and sometimes acrimonious debate on more momentous issues, and it may well have been that the delegates were tired, wanted to go home, and simply did not perceive this particular grant of power to the Congress to warrant any further debate, regardless of whether they considered it to have any particular significance.[85]

The Intellectual Property Clause may have passed without debate in the infancy of the new nation but its' impact and considerable debate about its meanings would be felt throughout the development of the new nation and onward into the creation of the U.S. as an industrial power.[86]

B. Copyrights

A copyright is essentially a set of exclusive rights granted to a creator as to the ownership and use of their creative works.[87] Under copyright law, copyright owners have the rights to: (1) reproduce the work; (2) prepare derivative works; (3) publicly distribute copies of the work; (4) [for some owners]

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82. KIMBERLY MOORE ET. AL, PATENT LITIGATION AND STRATEGY (5th Ed. 2008); KURT M. SAUNDERS, INTELLECTUAL PROPERTY LAW: LEGAL ASPECTS OF INNOVATION AND COMPETITION (2016).

83. Davis, *supra* note 39, at 149.

84. *Id*. at 150.

85. Walterscheid, *supra* note 79, at 19.

86. CRAIG JOYCE ET. AL., COPYRIGHT LAW 19 (7th ed. 2006) ("Little is known about what precisely the framers had in mind in adopting this provision, which was approved in final form without debate in a secret proceeding on September 5, 1787. The constitutional language-which does not even employ the term "copyright"[or patents] seems to suggest that the dominant purpose of the Framers was to promote the creation (and by implication, the dissemination) of knowledge, so as to enhance public welfare. This goal is to be achieved through provision of an *economic* incentive: a monopoly right given for 'limited Times', whose direct beneficiary is the 'author'.").

87. SAUNDERS, *supra* note 82, at 259; JOYCE, *supra* note 86 (An area of federal law which recognizes property rights in intangible products of the mind: for artistic and literary expressions).

publicly display the work; and (5) publicly perform the work. Other copyright owners of sound recordings have only the right of public performance by digital transmission.[88]

Congress derives authority to enact Copyright laws from an express grant of an enumerated power articulated in Art 1, § 8, cl. 8 of the United States Constitution:

The "Congress shall have Power…To promote the Progress of Science And useful arts, by securing for limited times to Authors and Inventors The Exclusive Right to their respective Writings and Discoveries."[89] This section of the U.S. Constitution, known as the *Intellectual Property* or *Copyright and Patent* Clause, is the legal foundation for the federal Copyright (and Patent Statute codified in Title 35) statute, codified in Title 17 of the U.S. Code.

The Copyright Act, adhering to Constitutional parameters, identifies the threshold requirements for copyright protection. These requirements include codifying the exclusion from protection of ideas, facts, methods of operation belonging in the public domain, granting exclusive rights to copyright holders, identifies who is entitled to claim these rights, and providing penalties for those who infringe those rights.[90]

C. Trademarks

An area of Intellectual Property protection that does not spring from the Constitution's Patent and Copyright clause: trademarks. Trademarks are those identifying marks or symbols that serve to distinguish one entity's goods from an entity's competitors.[91] For example, a trademark can be a word (Apple), a symbol (Nike Swoosh), or a pictorial likeness (like the ex-slave imagery on Aunt Jemima bottles), used in commerce. Originating in common law, trademark protection confers upon the owner a broad range of property-like rights.

In a series of three consolidated cases, called the Trade-Mark Cases,[92] the Supreme Court questioned and ultimately struck down the authority of Congress to regulate marks pursuant to Art. 1, sec. 8, cl. 8.[93] Congress responded

88. 17 U.S.C. § 106 (2002) (citing the exclusive rights).

89. U.S. CONST. art 1, § 8, cl. 8.

90. JULIA E. COHEN, ET AL., COPYRIGHT IN A GLOBAL INFORMATION ECONOMY 4 (4th ed., 2002).

91. BLACK'S LAW DICTIONARY 712 (9th ed. 2009).

92. *In re* Trade-Mark Cases, 100 U.S. 82 (1879) (Holding that the Copyright Clause did not give Congress the power to regulate trademarks.). This case a consolidation of three cases: *United States v. Steffens*, (Concerning counterfeit markings for champagne; Steffens was indicted under the fourth and fifth sections of an act of Congress entitled 'An Act to punish the counterfeiting of trade-marks and the sale or dealing in of counterfeit trade-mark goods.); *United States v. Wittemean*, (Also concerning counterfeit markings for champagne; Witteman was indicted under section five of the Act.); and *United States v. Johnson*, (Indicted under the same Act for counterfeiting whiskey markings.).

93. *See id*.

by passing the Trade Mark Act of 1881. This and other subsequent federal enactments protecting trademarks were grounded on the Congressional grant of authority in the Commerce clause,[94] rather than the Copyright Clause, and are clearly designed to protect property interests. However, some insist that the rationale of Trademark law lies in consumer protection.

Trademarks can receive both federal and state protection. In 1870, Congress enacted the first federal Trademark law. Shortly thereafter the Trade Mark Acts of 1881 were passed by Congress to clarify a constitutional question as to the authority of Congress to enact a federal registry under the Intellectual Property Clause. Pursuant to the Commerce Clause authority of the U.S. Const., art. I, § 8, cl. 3, Congress provided for the registration of trademarks that were either "used in commerce with foreign nations, or with the Indian tribes, provided such owner shall be domiciled in the United States, or located in any foreign country or tribes, which by treaty, convention, or law affords similar registration privileges to citizens of the United States."[95] This act provided that registration amounted to "prima facie evidence of ownership."[96] Infringement of the registered trademark was thereafter prohibited.

In 1905, Congress expanded trademark protection to marks used in commerce "among the several states."[97] Relying on its Commerce Clause authority, Congress enacted the Trademark Act of 1946, otherwise known as the Lanham Act.[98] The Lanham Act provides for the registration of trademarks used in commerce. Commerce, as defined by the Act, means "all commerce which may lawfully be regulated by Congress."[99]

The reasons for offering trademark protection can be found in two conflicting rationales. One is a property-based approach. Under this theory, trademarks are considered property and should be protected as all property is in the United States. Trademark protection belongs fully and completely to its owner. It exists as a matter of rewarding and thereby encouraging investment in the marks themselves.[100] Trademark occurs when a word or symbol is used in a manner that leads the consumers to associate that word or symbol with the products or services of a particular company or individual.[101]

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94. U.S. CONST. art I, § 8 cl. 3.

95. Act of Mar. 3, 1881, 46 Cong., 3d Sess., 21 Stat. 502 (1881).

96. *Id*.

97. Trademark Act of 1905, Pub. L. No. 84, 58th Cong., 3d Sess., 33 Stat. 724 (1905).

98. 15 U.S.C. § 1127 (1946) (Trademark laws are codified under this provision, which is known as the Trademark Act, and also known as the Lanham Act.).

99. *Id*.

100. Glynn S. Lunney, Jr., *Trademark Monopolies*, 48 EMORY L.J. 367, 371 (1999).

101. *See* 15 U.S.C. § 1127; *see also* KENNETH L PORT, TRADEMARK LAW AND POLICY 42 (2d ed. 2008) ("A trademark is a word, phrase or symbol that is used to identify a manufacturer or sponsor of a good or the provider of a good or the provider of a service. It's the owner's way of preventing others from duping consumers into buying a product they mistakenly believe is sponsored by the trademark owner.") (citation omitted) (quoting *Mattel, Inc. v. MCA Records*, 296 F.3d 894, 901 (9th Cir. 2002).

Trademarks are awarded to the person, company, or business that uses or intends to use the mark in commerce to sell goods or services.[102] Trademarks, unlike patents and copyrights, are not limited in duration by statute or the Constitution. They remain protected in perpetuity as long as they retain distinctiveness and comply with durational registration requirements.[103]

The second rationale for providing protection for marks has a public focus. In its broadest sense, this rationale is a "deception-based" justification for trademarks.[104] This rationale is grounded in the legal assertion that the purpose of a trademark is to enable consumers to find the goods and services they are seeking without fraud or deception.[105]

Under this public focus rationale, there are two competing concerns: minimizing the risks of consumer confusion and minimizing consumer search costs. Under the consumer public protection rationale, the trademark regime supports competition in the marketplace.[106] In the final analysis, the Lanham Act is designed for transparency in providing consumers with information to allow informed choices in purchasing decisions. Reducing deception should operate to allow informed consumer choices through transparency in a market place.[107]

Initially, the trademark law was grounded in the Intellectual Property Clause. However, this changed after the *Trade-Mark Cases*, wherein the Supreme Court decided that Congress did not have the authority to regulate trademarks through the Copyright and Patent Clause.[108] Beginning in 1881 and extending to the present, Congress has utilized the Commerce Clause to create and amend the IP protective legal regime based both on property and

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102. 15 U.S.C. § 1127 ("Any word, name, symbol or device, or any combination thereof used by a person to Identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown.").

103. 15 U.S.C. §§ 1058, 1059, 1064.

104. *See* KENNETH L. PORT, *supra* note 101, at 24 ("Thus, trademark protection is justified as a tort intended to prevent the consumer from being deceived, not a trespass on the trademark itself."); *see also Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 157 (1989) ("The law of unfair competition has its roots in the common law tort of deceit: its general concern is with protecting consumers from confusion as to source. While that concern may result in the creation of 'quasi-property rights' in communicative symbols, the focus is on the protection of consumers, not the protection of producers as an incentive to production innovation."), *qouted in* Kenneth Port, *supra*, at 24.

105. *See* Hanover Star Milling Co. v. Metcalf, 240 U.S. 403, 412-413 (1916); *see also* Elgin Nat'l Watch Co. v. Illinois Watch Case Co., 179 U.S. 665, 674 (1901) ("The manufacturer of particular goods is entitled to the reputation they have acquired, and the public is entitled to the means of distinguishing between those and other goods; and protection is accorded against unfair dealing, whether there be a technical trademark or not. The essence of the wrong consists in the sale of the goods of one manufacturer or vendor for those of another.").

106. HILLIARD, WELCH & WIDMAIER, TRADEMARKS AND UNFAIR COMPETITION 6 (9th ed. 2012) ("Traditionally, trademark and unfair competition law prohibits any conduct that is likely to confuse or deceive consumers as to the source of goods or services.").

107. *See id.* at 16-17.

108. *See In re* Trade-mark Cases.

monetary foundations.[109] The Lanham Act[110] provides the Congressional authority for the expansion of the trademark federal regime into areas which represent both the consumer and the public at large.[111] Recently in ascertaining Congress's ability to protect the public under the Lanham Act, the Supreme Court had the occasion to test the constitutionality of a provision of the Lanham Act which sought to protect a segment of the public from 'disparaging remarks'.

In *Matal v. TAM*, 137 S.Ct., the Supreme Court interpreted the Lanham Act and held that the Lanham's Act's disparagement clause violated the Free Speech clause of the first Amendment. In *TAM* , the Supreme Court affirmed the judgment of the US Court of Appels for the Federal Circuit, holding that the prohibition against registration of disparaging marks in Section 2(a) of the Lanham Act violates the Free Speech Clause.

This arose from an application by Simon Shiao Tam, who filed with the USPTO[112] to register the mark "SLANTS" for his band. The Examiner from the USPTO refused to register the mark citing that the mark consisted of matter that may disparage, bring into contempt or disrepute persons, institutions, beliefs or national symbols.[113]

The Federal Circuit siting en banc, vacated the TTAB's decision that the mark was unregistrable.[114] The Federal Circuit concluded that the Section 2(a)'s prohibition against disparagement was unconstitutional because it was a violation of the Free Speech clause of the First Amendment.[115]

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109. HILLIARD, *supra* note 106, at 7. ("As a part of the developing law of trademarks, and particularly with the advent of the registration statues, there appeared the notion that the right in a trademark is an actual property right. In 1879, the United States Supreme Court stated that the right to adopt and use a symbol or a device to identify one's merchandise with oneself and distinguish it from that of others was a right long recognized by the common law. The notion that trademark rights are property rights remains strong.") (internal citations omitted).

110. Lanham Act, 15 U.S.C. §§ 1051 *et seq.*

111. Jeremy N. Sheff; *Biasing Brands,* 32 CARDOZO L. REV. 1245 (2011) ('Trademarks have multiple effects on consumers, each of which has different normative implications. First, and consistent with the search-costs model, trademarks inform consumers: they provide consumers with objective information about the products and services to which they are affixed. Second, trademarks persuade consumers: Marketing efforts can generate or change consumer preferences to align with whatever qualities-including subjective qualities-are perceived to be offered by a marketed product.").

112. The USPTO is the federal agency that administers the Lanham Act and regulates registration of trademarks on the federal trademark register. USPTO trademark regulations appear in title 37 of the Code of Federal Regulations.

113. 15 U.S.C. § 1052(a).

114. *In re Tam*, 808 F.3d 1321 (Fed. Cir. 2015) (The Federal Circuit concluded that Section 2(a)'s disparagement provision burdens private speech based on government disapproval of the message it conveyed and is therefore subject to strict scrutiny. The court also noted that it is undisputed that the provision cannot survive strict scrutiny. Further the Federal Circuit determined that section 2a's disparagement provision: discriminates based on approval of the message and is not content or viewpoint neutral; regulates the mark's expressive aspects, not its function as commercial speech).

115. "Congress shall make no law…abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances."

In granting certiorari, the Supreme Court addressed first the threshold issue of the constitutionality of the disparagement clause.[116] The Supreme Court struck the disparagement clause, because the plain terms, and breadth of the disparagement clause was applicable to marks that disparage members of a racial or ethnic group and was not limited to marks that disparage a particular natural person.[117]

The Supreme Court rejected the Government's argument that the marks were government speech and thus subjected to a lesser level of scrutiny than private speech.[118] The Supreme Court held emphatically that the trademarks are private speech. If the marks had been government speech, the Free speech clause would not have applicable to the trademark.[119] The Court held that trademarks are private speech.

In holding that the trademarks are private speech the Supreme Court used the following rationales: 1) the USPTO does not create or edit marks; 2) if the mark meets the Lanham Act's requirements, registration was mandatory; 3) and a trademark examiner's decision is not reviewed unless the registration was challenged.[120]

The Supreme Court determined that the government's argument that this was subsidized government speech was not instructive. First because trademarks are not a form of government subsidy, because the USPTO does not pay parties seeking registration of marks. In fact, the trademark applicant must pay the USPTO.[121]

Next the Supreme Court held that trademarks are not commercial speech and subject to the relaxed judicial scrutiny standard outlined in *Central Hudson Ga & Electric Corp. v Public Service Commission of N.Y.*, 447 U.S. 557 (1980).[122]

The Supreme Court held that there was no need to address and resolve the 'commercial speech' issue since, according the Court, the disparagement

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116. Matal v. Tam, 137 S. Ct. 1744, 198 L. Ed. 2d 366 (2017) (The U.S. Supreme Court held that the disparagement proscription constitutes un constitutional government regulation of expression based on message in violation of the First Amendment).

117. *Id.* (Supreme Court Justice Alito held that the disparagement clause of Lanham Act, prohibiting federal trademark registration for marks that might "disparage any persons, living or dead," was facially invalid under First Amendment protection of speech, as it offended a bedrock First Amendment principle that speech may not be banned on the grounds that it expresses ideas that offend).

118. *Id.* at 1759 (Federally registered trademarks are private speech, not government speech).

119. *Id.* (The First Amendment, which prohibits Congress and other government entities and actors from abridging the freedom of speech, does not say that Congress and other government entities must abridge their own ability to speak freely).

120. *Id.* at 1761; *In re Tam*, 808 F.3d at 1353 (The Federal Circuit concluded that these fees have fully supported the registration system for the past 27 years).

121. *Matal v. Tam,* 137 S. Ct at 1761, 1762.

122. Central Hudson Ga. v. & Electric Corp. v. Public Service Commission of N.Y., 447 U.S. 557 (1980).

clause could not withstand even the relaxed standard of Central Hudson. The Central Hudson standard required government regulation to serve a substantial interest and the language must be narrowly drawn.[123] "This means, among other things that 'the regulatory technique may extend only as far as the interest it serves.; The disparagement clause fails this requirement.'"[124]

The Government's interest in preventing speech that expressed ideas that offend; and protecting the free flow of commerce was not narrowly drawn. [125]

Supreme Court Judge Alito, writing for the Court, affirmed the Federal Circuit and held that this clause was a complete constitutional violation.

Because First Amendment jurisprudence requires that the government must avoid viewpoint discrimination and remain content neutral to survive judicial scrutiny[126] the disparagement clause fails.[127]

Previously the supreme Court held that content-based regulations are presumptively invalid. Government restrictions based on the content of the speech may be justified only if the government proves that they are narrowly tailored to serve a compelling state interest. Strict scrutiny.

Here the Supreme Court held that this regulation not only involved content discrimination but also viewpoint discrimination.[128] Content based regulations are presumptively invalid. But restrictions on the substantive viewpoint of the speaker are another form of egregious content discrimination.[129] Here the government is engaged in viewpoint discrimination-favoring happy talk about every person, living or dead, and every institution, but disfavoring speech that expresses opprobrium ideas.

The Supreme Court completely ignored the *Walker v. Texas*, Sons of Confederacy case,[130] finding that these trademarks were not government speech.

In a limited public forum where government speech may express a message and a viewpoint, the government would be allowed to favor a viewpoint. In a limited public forum such as license plate tags, the Supreme Court has held that government could decide to refuse to register license tags which

123. *Matal v. Tam*, 137 S. Ct. at 1764.
124. *Id.* at 1764.
125. *Id.* at 1764.
126. *Id.*
127. *Id.* at 1763.
128. *Id.* at 1763 ("Our cases use the term discrimination in a broad sense, *see* ibid., and in that sense, the disparagement clause discriminates on the bases of viewpoint. To be sure, the clause even handedly prohibits disparagement of all groups. It denies registration to any mark that is offensive to a substantial percentage of the members of any group. But in the sense relevant here, that is viewpoint discrimination: Giving offense is a viewpoint.").
129. *Id.*
130. Walker v. Texas Div., Sons of Confederate Veterans, Inc., 135 S. Ct. 2239 (2015) (The Supreme Court held that specialty license plate designs were government speech, and thus the First Amendment was not violated by rejection of Confederate flag design).

were disparaging, racially offensive or psychological assaultive on a group of people. Recognizing that government may have a role in preventing racially disparaging or damaging speech, vis a vis Confederate flags, the Court acknowledged government's societal role in preventing harm.[131]

Clearly setting a line between speech where the government may favor a viewpoint in a limited non-public forum and highly protected private speech, the Supreme Court failed to apprehend in the TAMs case the assaultive nature of racially disparaging speech in the context of intellectual property.

Like the *Dred Scott* case, the Court has misread the political history of the United States, ignored the context or our violent racial history and failed to apply a justice framed reading of the Constitution and the First Amendment protections.[132] Instead the court has addressed an issue of racially assaultive language by applying an interpretation which continues to protect the free speech for the already empowered.

IV. INTELLECTUAL PROPERTY AND THE INTERCONNECTIVITY OF INCOME INEQUALITY

A. Capital and Wealth Inequality

The income inequalities extant at the formation of this country flowed and continued into existence within the body of law that exists today. These inequalities exist not only in the purchasing power of goods necessary to sustain life, but also in the power to control and to require the government to be responsive to the will of the people. With greater disparities in wealth,[133] the moneyed interests control more of the wealth and more of the products of wealth and income. This includes control of intellectual property.

We must first begin with a basic understanding of *capital*, which can be defined as "the sum total of nonhuman assets that can be owned and exchanged on some market."[134] It includes "real property (including residential

131. *Id.*

132. Dred Scott v. Sandford, 60 U.S. 393 (1857) (The Supreme Court held that the word 'citizen' in the Constitution does not embrace one of the 'negro' race, which would allow Scott to sue in federal court; that congressional power to govern the territories of the United States did not extend to the exclusion of slaves from them, and that comity would not be extended in the matter of slavery); *see* VINCENT C. HOPKINS, DRED SCOTT'S CASE (1951).

133. Darrick Hamilton and William A. Darity, Jr., *The Political Economy of Education, Financial Literacy, and the Racial Wealth Gap*, 99 FED. RES BANK OF ST. LOUIS REV. 1, 59-76, 60 (2017), http://dx.doi.org/10.20955/r.2017.59-76 (last accessed Dec. 9, 2017) ("In the U.S. context, data from the Federal Reserve's Survey of Consumer Finances indicate that in 1989 the top 10 percent of households held about two-thirds of the nation's private wealth, and by 2013 this disparity accelerated with the top 10 percent now holding about three-quarters of the nation's private wealth. Moreover, the bottom half of all households owns only about 1 percent—this provides a novel way of thinking about the 1 percent.") (internal citations omitted).

134. PIKETTY, *supra* note 31, at 46-47.

real estate) as well as financial and professional capital (plants, infrastructure, machinery, and patents) used by firms and government agencies."[135] Nonhuman capital "includes all forms of wealth that individuals (or groups of individuals) can own and that can be transferred or traded through the market on a permanent basis."[136] Economist Thomas Piketty argues that capital does not include human capital.[137] In slave societies, slaveholders can own the human capital of another person and of that person's offspring. Slaves can be bought and sold on the market and conveyed by inheritance and are included in calculating a slaveholder's wealth.[138] Slaves are considered both non-persons and personal property.[139]

Human capital "is the sum total of skills embodied within an individual: education, intelligence, charisma, creativity, work experience, entrepreneurial vigor."[140] This naturally includes one's ability to craft a working software app or produce a lyrical song. During slavery and its aftermath—Jim Crow, segregation, mass lynching, land removal, and discrimination in housing, education and facets of everyday life—human capital in the African American community was misappropriated, plundered, and stolen.[141]

National capital is the total market value of everything owned by residents and government of a given country at a given point in time, provided that it can be traded on some market.[142] National capital consists of the sum total of non-financial assets (land, dwellings, commercial inventory, total buildings, machinery, infrastructure, patents, and other directly owned commercial assets) and financial assets (bank accounts, mutual funds, bonds, stocks, financial investments of all kinds, insurance policies, pension funds) less the total amount of financial liabilities (debts).[143] The assets and debts of private individuals is private wealth or capital. The assets and liabilities of the government and other governmental entities is public wealth or capital. National wealth or national capital equals private wealth plus public wealth.[144]

Income is defined as the flow attributed to production output after liabilities are deducted. Wealth, on the other hand, can be defined as what one owns minus what one owes.[145] Personal income is the money households receive

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135. *Id*. at 46.
136. *Id.*
137. Daina Ramey Berry, *The Ubiquitous Nature of Slave Capital*, *in* AFTER PIKETTY 128-29 (Heather Boushey et al. eds., 2017); *see also* PIKETTY, *supra* note 31, at 46-47.
138. Berry, *supra* note 137.
139. THE FEDERALIST NO. 54, *supra* note 80, (James Madison).
140. CHARLES WHEELAN, NAKED ECONOMICS: UNDRESSING THE DISMAL SCIENCE 127 (2010).
141. *Id*.; *see* Ta-Nehisi Coates, *The Case for Reparations*, The Atlantic, June 2014, at 62.
142. PIKETTY, *supra* note 31, at 46.
143. *Id.*
144. *Id*. at 46-47.
145. *See* Darity et al., *Beyond Broke, Why Closing the Racial Wealth Gap is a Priority for National Economic Security,* DUKE CTR FOR GLOBAL POL'Y SOLUTIONS (2014).

before taxes are deducted.[146] Income includes money received for buying factors of production to households. All the income in the economy flows into one of four categories: labor receives wages; land brings in rent; capital accumulates interest; entrepreneurship creates profit.[147] Companies pay salaries and wages to employees; which represent the largest single contributor to personal income, representing 56% of all income.[148] Other income sources include: proprietors income (8%), this includes monies paid for farm and non-farm businesses, store owners, private practice doctors, lawyers, and independent contractors; rental income (0.5%), earnings people receive from renting or leasing real estate (not their primary business); dividend income (4.5%), money stockholders receive from corporations; interest income (9%), monies from investments in interest bearing securities, treasury securities, and corporate bonds; transfer payments (12.5%), payments received from federal and state governments, social security payments, unemployment benefits, and food stamps; other labor income (9.5%), including employer paid and employee supplemental contributions such as worker life insurance, health plans, and pensions.[149] Personal income does not include any profits households receive from the sale of financial assets such as stocks, bonds or real estate.[150]

In a dynamic competitive economy, you need to pay for land, labor, and capital for production. You also need people who are willing to take on business risks and invest in untested new technologies. To incentivize those people to assume this risk, you have to pay them, which is why some income from profits must flow to risk-taking entrepreneurs. Workers charge wages for the labor services that they provide; owners of buildings and land charge rent to tenants for the services that real estate and physical structures provide; firms wanting to obtain the services of capital, like machines and computers, must pay for them in the loan. "[F]irms' profits must flow to the entrepreneurs and owners of the firms who take on the risk of the firm that may perform poorly or go bankrupt."[151] In short, income equals expenditures.[152]

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146. *See* Common Economic Indicators, https://www.census.gov/economic-indicators/; Personal income and spending: https://www.bea.gov/national/index.htm; U.S. Leading Economic Indicators Index, http://people.stern.nyu.edu/nroubini/bci/indexleadingeconomicind.htm; BERNARD BAUMOHL, THE SECRETS OF ECONOMIC INDICATORS: HIDDEN CLUES TO FUTURE ECONOMIC TRENDS AND INVESTMENT OPPORTUNITIES 63 (Jim Boyd ed. 2nd. 2008) (personal income represents the money households receive before taking out taxes).

147. PIKETTY, *supra* note 31, at 122.

148. BAUMOHL, *supra* note 146, at 63.

149. *Id*. at 64.

150. *Id*.

151. R. DAVID JOHNSON, AN INTRODUCTORY TO ECONOMICS: KEY CONCEPT SUMMARIES AND TOPICS IN
MICROECONOMICS AND MACROECONOMICS 143 (2017).

152. *Id.*

Income and wealth are used interchangeably throughout the article. However, *wealth* actually encompasses the term *income* because wealth includes all flows of income after taxes are deducted. Wealth is an intergenerational steppingstone that provides stability in times of economic distress. Through the accumulation of wealth, families are able to finance higher education, provide down payments for homes, and establish capital for creating businesses.[153] Wealth may also become the basis of inheritance for the next generation.[154] Income is required to pay for daily necessities, but it is wealth that "moves families beyond survival mode and opens up critical doors of opportunity that enable them to thrive over a lifetime."[155]

In the United States, wealth is not equally distributed. The wealthiest twenty percent of the population controls eighty-nine percent of the nation's wealth.[156] The top one percent of the nation's population possesses approximately thirty-eight percent of the nation's wealth.[157] These critical wealth disparities exist not only between financial and social classes, but also between white persons and people of color.[158] Racial wealth disparities have been attributed to 'centuries of policies,' which have advantaged some while 'simultaneously disadvantaging others,'[159] including housing policies and tax policies favoring affluent households.

B. Technology, Information, and Interconnectivity[160]

Intellectual property, income and wealth inequality, and interconnectivity, are inextricably connected, if not circling one another, causing ripples both in the way that laws are interpreted and how we view the IP world. These IP laws were conceived in a world and framed pursuant to a constitution where slavery held sway. As one scholar noted:

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153. Darity, *supra* note 145, at 7.

154. *Id*.

155. *Id*.; *see also* Berry, *supra* note 137, at 126, 149 ("Slavery perfused the entire economy, not just plantation agriculture." She argues, "Enslaved people contributed to capital in public entities throughout the New World. In the United States they contributed with the building of levees and road in the Deep South and their labor in shipyards, factories, and medical schools in the North. As human capital, their bodies and the products produced by them contributed to a national, local and global economy. They were not paid for their work, and municipalities capitalized on their labor, saving unprecedented amounts of money. Piketty missed an important opportunity to contribute ongoing conversations about the wealth generated by slave capital.").

156. Darity*, supra note* 145, at 7.

157. *Id*. (citing Edward Wolff, *The Asset Price Meltdown and Wealth of the Middle Class,* National Bureau of Economic Research (2012)).

158. *See* Hamilton and Darity, *supra* note 133.

159. Darity, *supra* note 145.

160. DEBORAH TUSSEY, COMPLEX COPYRIGHT: MAPPING THE INFORMATION ECOSYSTEM 25 (2012) ("The catchphrase 'the information ecosystem' has become a cultural meme describing the global electronic infrastructure through which massive quantities of digitized information continuously flow in our increasingly wired society.").

> In a broader perspective, the elites that controlled American colonial societies denied self-government and some degree of freedom to others in order to secure it for themselves. From the Mayflower Compact and the Laws and Liberties of Massachusetts through the Virginia Declaration of Rights, dominant elites subordinated others to secure their own liberty. Located in that kind of society, slavery is not egregious. It is merely the extreme realization of a condition, unfreedom that to a greater degree permeated most of early America. Unfreedom was not an aberration in early America, freedom was. From our first laws (Dale's Code, 1612) to the Declaration of Independence, the distinguishing features of American society were unfreedom, coerced labor, race control, and systematic legally sanctioned violence against racially distinct peoples.[161]

The aforementioned ripples caused by this historical foundation can be seen today in communication technology and our growing information ecosystem.[162] Communication technology is, at its core, about the ability of humans to interact, implement, adapt, and exploit technology in order to disseminate and/or receive information.[163] Where technology, its digitized content, producers, distributors, and consumers are involved in the creation and global distribution of the content, and the legal regimes that govern those activities all interact, they are interconnected and interdependent on their component parts. Deborah Tussey notes that network connectivity "enables the flow of information, money, products, energy, nutrients, or whatever other medium flows through the system. Consequently actors within the system are directly or indirectly involved in interdependent relationships with other actors."[164]

None of this is possible, however, without an existing consumer population.[165] As digital technologies replace analog technologies, the contents of disparate forms of media and information, from novels to newspapers and movies to magazines, are reduced to homologous electronic bits that can be transmitted instantaneously over global networks and easily copied. This transformation has created a host of problems for intellectual property law generally and copyright law in particular.[166]

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161. William M. Wiecek, *The Origins of the Law of Slavery in British North America*, 17 CARDOZO L. REV. 1711 (1996).

162. TUSSEY, *supra* note 160.

163. SCHMIDT & COHEN, *supra* note 38, at 10.

164. TUSSEY, *supra* note 160, at 15-16.

165. *Id*. (Tussey notes that institutional and individual agents are inherently interdependent. Numerous examples can be found in copyright sub-systems, such as the relationships that exist in the music industry: recording studios contract with radio stations and their artists, while their fans listen in to the radio, watch it on television, stream it from their apps or, occasionally, buy the finished product at the store. This same pattern can be seen in television networks, their producers and the individuals involved in every facet of a television show, from the actors and cameramen to the fans).

166. *Id*.

By itself, this connectedness should not pose a problem; however, coupled with the massive data accumulation and the monetization of intellectual properties, these inequalities are widening and pose ever-greater threats to democracy. To the extent that the ordinary citizen will be controlled by interconnectedness as he relinquishes more control over privacy, individual liberties, independence, cultural excellence, public goods, the common man and woman will become increasingly impoverished.

V. THE U.S. CONSTITUTION AS SOCIAL COMPACT: SLAVERY AND THE INTELLECTUAL PROPERTY CLAUSE

The Patent Act of May 1790[167] was the first patent-based legislative act to be born from the Constitution's Intellectual Property Clause.[168] This first act and its progeny all embody the same underlying notion: that "patent laws confer on a patentee the power to exclude all others from making, using or selling his invention."[169] Patents exist as a form of limited monopoly,[170] granted by the state to individuals as a way of protecting and promoting innovation while simultaneously rewarding creators and inventors. Though our body of patent laws may share in this foundational concept, the application has shifted since its first inception, resulting in disparate use and partial or total exclusion of whole populations from use and protection.

A. Patents and Power: Developing Property Interests and Ownership

To assess the meaning of patents as indicated by the drafters of the Constitution, it is necessary to refer to English law, the Founders' various writings, congressional records, judicial decisions, and treatises from the eighteenth and nineteenth century. However, in a reviewing these primary sources, there is very little debate or commentary about patents and copyrights.[171]

James Madison spoke in *the Federalist Papers* about the Copyright and Patent Clause:

> The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common

167. Patent Act of May 31, 1790, ch.7, 1 Stat. 109 (1790) (first patent act) (repealed 1793).

168. U.S. CONST. art I, § 8, cl. 8; *see also*, Robert I. Coulter, *The Field of the Statutory Useful Arts, Background of the Useful Art Proviso*, 34 J. PAT. OFF. SOC'Y 487 (1952).

169. 35 U.S.C. § 131; William F. Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L. J. 267 (1966).

170. Ramon A. Klitzke, *Patents and Monopolization: The Role of Patents Under Section Two of the Sherman Act,* 68 MARQ. L. REV. 557, 561-63 (1985).

171. *See*, Adam Mossoff, *Who Cares What Thomas Jefferson Thought About Patents? Reevaluating the Patent "Privilege" in Historical Context*, 92 CORNELL L. REV. 953 (2007).

> law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals. The States cannot separately make effectual provision for either of the cases, and most of them have anticipated the decision of this point, by laws passed at the instance of Congress.[172]

Historical records indicate that there was no debate over the Intellectual Property Clause embedded into Article I, Section 8 of the Constitution.[173] The drafters debated slavery—literal property at the time—but not the idea of intellectual property. It became apparent that there was no disagreement over the inclusion of this clause, which was designed to empower the newly formed government to incentivize innovation, and writings by rewarding the creators of these products. The inclusion of an intellectual property provision was, much like slavery, a market-based approach that encouraged the production of goods and the acquisition of capital or rents from those goods.[174]

These same foundational principles underline our current property interests, which themselves are increasingly digital and non-tangible. The accessibility of affordable smart devices, global interconnectivity, and the rapid escalation of digital technology have created both an information technology boom and the "internet of everything" ethos. The information technology expansion, the Internet ethos, the availability and affordability of smart devices, and the proliferation of global product expansion have created a digital-information ecosystem.

Yet startling inequities and insufficient allocations of resources exist within this country and throughout the world community with respect to intellectual property.[175] Perhaps the most egregious omission includes the failure of the intellectual property regimes to recognize the contributions of African Americans, people of color, and women. Historically, these groups have been denied appropriate compensation for innovations.[176]

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172. THE FEDERALIST NO. 43, at 271-72 (James Madison).

173. *See* Robert I. Coulter, *supra* note 168.

174. Sandara, Michael Andrews and Nicholas Ziebarth, *Historical Changes in the Demographics of Inventors in the United States* (Jan. 30, 2017), https://ssrn.com/abstract=2908160 (last accessed Dec. 9, 2017) (From 1870 to 1940, 96% of patentees were white; black patenting ran between 3 and 10% of the proportion of the total population; finding further that representation of blacks in patenting activity remains dismal in the 2000s).

175. Lateef Mtima, *What's Mine is Mine But What's ours Is Ours: IP Imperialism, The Right of Publicity, and Intellectual Property Social Justice In the Digital Information Age*, 15 SMU SCI. & TECH. L.REV. 323, 347 (2012) ("A social justice interpretation of intellectual property law begins with the identification of social injustices and inequities relevant to a particular area of intellectual property protection."); *See also* Arewa, *supra* note 81, at 575, 596-618 (discusses the copyright treatment of early blues artists and the "topography of incentive and reward for such artists have direct bearing on continuing debates in the music copyright arena today"; describes the treatment of particular blues artists as illustrating the operation of copyright in blues context; further citing the inequitable treatment of copyrights on musical creation, reproduction and dissemination of early blues recordings).

176. Arewa, *supra* note 81, at 576. (Arewa discusses how the business contexts of blues particularly in its earliest iterations show how "[p]ervasive segregation in the music industry diminished the creative

The treatment of people of color often includes cultural appropriation without compensation.[177] This appropriation is often compounded by the ways in which the intellectual property laws continue to operate as a barrier to the accessibility of compensation for people of color.[178]

The intellectual property laws were written in the midst of the drafting of a Constitution with a minimum of eight pro-slavery sections. At a maximum, the Constitution was a document drafted in order to create a union by a series of compromises between regions which supported slavery, regions which were neutral, and political interests in commerce and trade. In order to create the union, the drafters of the Constitution crafted a document to protect, both politically and economically, the "peculiar institution" of slavery and the interests of the slaveholders. As a result, in 1787, the enslavement of African Americans was the critical point of debate and compromise. As such, any clause created by the drafters that impacted trade, commerce, and the regulation of such had to pass, what I have named "the slave tolerance test."[179]

Scholars debate as to whether the intellectual property protections in the United States were created for utilitarian purposes, moral awards to authors,

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role and compensation of a broad range of artist, including African American blues musicians."); *see also* Olufunmilayo B. Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context*, 84 N.C.L.REV. 547, 601 (2006); *see also*, Larry Rother, *For A Classic Motown Song About Money, Credit Is What He Wants*, N.Y. Times, Sept. 1, 2013, at A1.

177. A HAMMER IN THEIR HANDS: A DOCUMENTARY HISTORY OF TECHNOLOGY AND THE AFRICAN-AMERICAN EXPERIENCE, xi (Carroll W. Pursell, ed., MIT Press 2005) (Pursell took the title, "Hammer in Their Hands" from the folklore tale of John Henry, a steel driving man:
"[t]here are at least two other senses in which the John Henry story provides a mixed message about black and technology. Like some other American folk heroes[ ], he was celebrated for matching his craft skills against the industrial mechanization (in this case a stem drill) that was destroying those same skills. . . . The second irony is that while John Henry won that race against the steam drill, he died with his hammer in his hand. Like John Henry, black Americans have done much of the hard work of building this country, using what tools they were allowed with a level of skill, often denied, that those tools demanded.");
Pursell further notes:
"As the material collected in this book make patently clear, enslaved Africans and African Americans have been skilled artisans and engineers, inventors and steel driving men, manufacturers and Internet Web-site designers. To ignore all of this rich and varied historical experience is not only to distort the history of American technology, but to reinforce racial and gender stereotypes that continue to disadvantage so many Americans…Gender and race powerfully interact to undergird hierarchical power and advantage, and technology plays an important role in that process.";." *Id.* at xiv-xv.
cf fn Nina E. Lerman, Arwen Palmer Mohun & Ruth Oldenziel, *The Shoulders We Stand on and the View from Here: Historiography and Directions for Research,* 38 J. HOPKINS J. TECH. & CULTURE 9, 9-30 (1997).

178. Unsigned, *Not in Court 'Cause I Stole A Beat: The Digital Music Sampling Debate's Discourse on Race And Culture*, U. ILL. J.L. TECH & POL'Y, Spring 2012, 141, 142-43 (discusses the racialized rhetoric used by law enforcement and the courts when they address sampling by certain racial groups); *cf* Kelefa Sanneh, *With Arrest of DJ Drama, the Law Takes Aim at Mixtapes*, N.Y. Times, Jan. 19, 2007, at E1.

179. PAUL FINKELMAN, SLAVERY AND THE FOUNDERS: RACE AND LIBERTY IN THE AGE OF JEFFERSON 6 (2001) ("A careful reading of the Constitution reveals that the Garrisonians [who argued that the Constitution was principally a pro-slavery document] were correct: the national compact favored slavery").

or natural rights compensation.[180] A settled issue, however, is that the creators of the new union needed to provide a cohesive compact which allowed the union to exist; co-extensively with an environment which facilitated the development of trade and commerce. A nuanced view of the U.S. copyright and trademark clause would acknowledge that some or all the reasons as earlier appeared in European copyright and patenting acts were also extant in 1787; coupled with the emergent economic needs of the new nation.[181]

The colonists wanted economic development and believed that innovation and technology were tools to help. The colonists made concessions to slavery in order to create a lasting union. Concessions some historians argue ultimately caused the Civil War.[182] It is also true that copyright and patents were used slightly at first but ultimately created an environment of innovation in the new world.[183]

What has not been adequately addressed is that these intellectual property statutes were drafted in an environment which supported slavery, oppression, and discrimination against a group of people. Slaves were considered the property of the master, borrower, lessor, or any other person with a possessory interest.[184] The master owned any profits from the slaves' labor; the master owned any rents and proceeds from any developments by the slave. As such, the master, the gatherer of capital, began to amass the profits and rents from the enslaved. The laws were written for his benefit.[185] The laws were designed to encourage the proliferation of capital and capital rents to the elites, the slave owners, and the colonial gentry.

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180. *See generally*, EDWARD C. WALTERSCHEID, THE NATURE OF THE INTELLECTUAL PROPERTY CLAUSE: A STUDY IN HISTORICAL PERSPECTIVE 133-39 (2002); *see also,* THE FEDERALIST NO. 43 (James Madison).

181. For a further discussion on the basic goals of intellectual property laws, *see* Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1535 (1993); Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 294 (1988); Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History*, 1550-1800, 52 HASTINGS L.J. 1255 (2001); Malla Pollack, *The Owned Public Domain: The Constitutional Right Not to be Excluded-Or the Supreme Court Chose the Right Breakfast Cereal in* Kellogg v. National Biscuit Co., 22 HASTINGS COMM. & ENT. L.J. 265 (2000); and GHOSH ET AL., *supra* note 73.

182. BOUTON, *supra* note 44.

183. GHOSH, *supra* note 73, at 1047-8.

184. *See* State v. Mann, 13 N.C. 263 (1829) (Holding that the Master was not liable for an indictment for a battery committed upon his slave. The court extended this right to any person who had a right to the labor of a slave. Therefore, anyone who had hired a slave was not liable to an indictment for a battery on him that was committed during the hiring).

185. BOUTON, *supra* note 44, at 262 ("In the more than two centuries that have followed the Revolution, the barriers against democracy put in place by the founding elite have frustrated countless movements intent on enacting changes opposed by the ruling elite… Along with radically scaling back the practiced of democracy, the defeats of the 1780s and 1790s also weakened democracy's meaning-primarily in the way the elite founders attempted to eradicate the idea that concentrations of wealth pose a threat to the republic.").

Today, intellectual property laws that support the protection of data information as intellectual property serve to provide capital and capital rents to the new owners in the connected global economy.

Connectivity creates consumers not inventors. You do not own your data. In order to find out where the latest Starbucks is in relationship relation to you, you have to give your location. That location allows the corporation to use data on you as currency. Your location, on a given day, your tastes, your habits, your buying proclivities, and your viewing tastes all become part of the information that the corporation uses to provide you with interconnectivity which as a convenience you buy. You buy the apps, you buy the product, you buy the surrender of your data for a fee. In effect, you pay for someone to provide a snapshot of you for you to purchase goods.[186]

Where does income inequality fit in? As elites' capital interests grow larger, they receive a larger share of the capital wealth. Meanwhile, the remaining population receives less and less. Resources are tailored to the amassing of wealth for the gentry.[187] The majority of the population, which itself struggles with shrinking labor wages and access to public goods, is left to fight for a smaller portion of wages and, ultimately, capital.[188] The corporations look for lower tax shelters, which are often outside of the country, ways of reducing income for people who make the products, and ways of decreasing their corporate bills.[189] Meanwhile, citizens from the working class are stuck in the cyclopean circle of needing the connectivity to maintain a lifestyle which in turn requires greater connectivity and indebtedness.

In the transition from the horse and buggy mode of transportation to powered engines, the ability to travel on the granite highway was detrimental to the use of the outmoded transportation. Your ability to move on the connected highways may be curtailed without access to connected automobiles which in turn depends on intellectual property protected capital.

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186. TUSSEY, *supra* note 160, at 25.

187. BOUTON, *supra* note 44, at 263 ("The result of that transformation was a largely unimpeded concentration of wealth across the nineteenth and early twentieth centuries.").

188. Suresh Naidu, *A Political Economy Take on W/Y*, *in* AFTER PIKETTY 99-125, 100 (Heather Boushey et al. eds., 2017) ("Wealth is most accurately conceptualized as a claim on future resources. It results from purchases of durable property rights over assets, such as machines, houses, patents, or oilfields, that are either productive (in which case people bid to use them) or extractive (in which case people pay to keep legal process from being used against them). The salience of wealth matters, and depends on how much of the economic pie it lays claim to.").

189. Gareth A. Jones, *The Geographics of Capital in the Twenty-First Century: Inequality, Political Economy and Space*, *in* AFTER PIKETTY 280-303, 284 (Heather Boushey et al. eds., 2017) ("[F]undamental to the new political economy is the power of capital to appear on paper in locations distinct from a physical asset, or to locate in extra-legal spaces that are obscure to the purview of state and international governance protocols. The most obvious of these spaces are tax havens . . . .").

For example, in the future, a person most likely will not be able to purchase a car that is not a smart car.[190] Your ability to access the highways via that smart car will be determinative upon your ability to purchase the "smart" automobiles. This will itself be based on your ability to obtain employment, which is in turn dependent upon your ability to obtain a certain education, from a certain type of school. Without the benefit of educational resources at the lower levels you will not be admitted into the schools which will provide you with entry into the employment you seek.

Your ability to make purchases depends upon credit scoring. Your credit score, determinative of purchasing ability, is linked to your spending habits and income level.[191] This credit score is itself also inextricably linked to intellectual property protected algorithms.

Whether as a quasi-free market, a structured controlled system, a gray market, or even a bootleg, the marketplace operates in a continuous state of dynamic pressure on and within the technological ecosystem. There are other environmental factors affecting the ecosystem, such as wages, labor, capital, and the affordability of technology operating in the system. Lastly, there are the legal regimes which operate to either control the growth, stymie the harmful effects, regulate the outcome, incentivize the use of any, or all the entities or factors operating in the ecosystem, punish the mis-appropriators, or reward the beneficiaries.

The primary federal regimes of Intellectual Property law, or what I call The Big Three (copyright, trademarks, and patents), were enacted ostensibly to inure to and for the public interest while monetizing creativity and promoting economic development. The United States Constitution affirmatively states that Congress "shall have the authority" to enact legislation to further the public interest by providing a limited monopoly for innovative and creative works.[192] In reviewing The Big Three, it becomes increasingly clear that an Intellectual Property regime based upon property interests operates to reward or benefit those persons with access to property and capital. This system is complex. Naturally, easy access to those with reachable capital means there are barriers elsewhere. Traditionally, the implementation of such laws has impacted African Americans more negatively than other communities. The negative aspects of this access-barrier paradigm continue to ripple through the Intellectual Property legal infrastructure and the African American creative community.

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190. The term "smart car" generally refers to an automobile with electronics systems meant to monitor, track, and benefit the automobile's performance and functions.

191. Brenda Reddix-Smalls, *Credit Scoring and Trade Secrecy: An Algorithmic Quagmire or How the Lack of Transparency in Complex Financial Models Scuttled the Finance Market*, 12 U.C. DAVIS BUS. L.J. 87, 102-03 (2011).

192. U.S. CONST. art I, § 8, cl. 8.

B. African Americans, Slaves, and Intellectual Property

Africans stolen and forcibly carried to the New World colonies for exploited labor were utilized as a source of market expansion for the North American colonists. The enslavement and value of the brawn and muscle of captured Africans in expanding production of commodities have been well documented and extensively studied.[193] Scholars assert that slavery and the slave trade served as a crucible for the expansion of European capitalism in the late sixteenth and seventeenth century.[194] Profits made from slavery and slave-based enterprises in the New World,[195] chiefly mining and plantation agriculture, fueled capital investment[196] during the Industrial Revolution.[197] The development of British and French banking, insurance, and heavy industry, to say nothing of the merchant marine and the navy, was made possible through the labor of Africans in the Caribbean and in continental North America. The great export staples of the seventeenth through nineteenth centuries (sugar, tobacco, and cotton) were grown almost entirely by enslaved African labor. "These, plus lesser exports such as rice and indigo (also grown by slave labor,) were the basis of industrialization of the New and Old Worlds."[198]

Simultaneously, the systematic extermination of the American Indians (Amerindians) occurred at the hands of the Europeans, resulting in the greatest known population loss on the continent. Exposure to European pathogens

193. Some estimate over 50,000 books have been written on the topic of slavery and the American Civil War, in addition to countless articles, treatises, documentaries, theses and news stories. *See* JEFFREY ROGERS HUMMEL, EMANCIPATING SLAVES, ENSLAVING FREE MEN: A HISTORY OF THE AMERICAN CIVIL WAR 3 (2d ed. 2014) ("More has been written on the subject than almost any other event in human history: by one estimate, 50,000 separate books.").

194. RONALD TAKAKI, A DIFFERENT MIRROR: A HISTORY OF MULTICULTURAL AMERICA 75 (2008) ("After 1800, slavery became enormously profitable not only in the cotton producing states from Georgia to Texas but also in what became the slave breeding states of Virginia and Maryland. In turn, cotton production ushered America into the Market Revolution-the take off years that transformed America into a highly complex industrial economy. At the core of this economic boom was the ascendancy of the Cotton Kingdom.").

195. DAVID BRION DAVIS, INHUMAN BONDAGE: THE RISE AND FALL OF SLAVERY IN THE NEW WORLD 80 (2006) ("In 1750 black slaves could be seen in an uninterrupted succession of colonies from French Canada and New England all the way south to the Spanish settlements in Chile and Argentina. In the Caribbean they constituted up to 90 per cent or more of the population of the richest colonies in the world. And the demand for such productive slaves continued to rise in one colony after another.").

196. *Id*. at 87 ("And it is no exaggeration to say that the sugar colonies in the Atlantic islands, followed by those in Brazil and the Caribbean were made possible by investment capital from merchant bankers who then reaped enormous profits by marketing sugar and other slave grown produce throughout Europe.").

197. TAKAKI, *supra* note 194, at 76-77 ("But the most 'decisive' impetus of the Market Revolution was cotton. Cotton was strategic, observed economist Douglas C. North, 'because it was the major independent variable in the interdependent structure of internal and international trade. The demands for western foodstuffs and northeastern services and manufactures were basically dependent upon the income receive from the cotton trade.").

198. Wiecek, *supra* note 161, at 1738.

such as smallpox, malaria, yellow fever, influenza, typhus, and the plague caused heavy mortalities. Jamaica, Cuba, and Puerto Rico were populated with millions of Amerindians. By the 1540s, the population of Central Mexico was decimated by a reduction of ninety-five percent of the native population in seventy-five years. Peru and Chile's native genocide was almost as high. The death rate in the Caribbean was immense. Plagues combined with the encomienda system and mass slaughter annihilated the native populations. The Spaniards seized land and enslaved the indigenous people in a feudal system called the encomienda. This was established as an effort to Christianize a community but in actuality it helped to destroy the populations.[199] In North America, as with Central and South America, from the initial landing of the English in Jamestown, the European conquest of the Americas included a history of stolen lands, sickness, suffering, war, and starvation.[200] The mass slaughter of an indigenous multi-national people with culturally developed communities does not mean that the products, the intellectual products of the minds of the people, were eliminated. Traditional medicines, farming, folk tales, art-wares, music, and the transposition of natural resources into technological products are commonly recognized remnants of a culturally extant, albeit tribally disposed, number of native people that still exist today. These products would be and are subject to intellectual property protections. However, without specific legal filing and recognition, the law generally provides protections and ownership to the capital owning entities, and not the original creators.[201]

In the developing agrarian economy of the Southern United States from the 1700s onward, an increasing amount of the industrial labor, both agricultural and mechanical, was performed by these enslaved Africans.[202] As a result, many of these artisans, mechanics, skilled and ordinary laborers were black. It is only natural that a variety of mechanical labor-saving devices and inventions came from this enslaved population.[203] As one author noted,

> Slave work involved much more than mere laboring in the fields. Indeed, slaves undertook the most varied of working tasks, from the simplest of labours through to the most skilled of crafts, everywhere in the Americas.

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199. Davis, *supra* note 195, at 97.

200. TAKAKI, *supra* note 194, at 45.

201. *See* WIPO: Intergovernmental Committee on Intellectual Property: and Genetic Resources, Traditional Knowledge and Folklore (IGC) ("Traditional knowledge is not so-called because of it's antiquity. It is a living body of knowledge passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. As such, it is not easily protected by the current intellectual property system, which typically grants protection for a limited period to inventions and original works by named individuals or companies. Its living nature also means that 'traditional' knowledge ' is not easy to define.'").

202. DAVID E. WHARTON, A STRUGGLE WORTHY OF NOTE: THE ENGINEERING AND TECHNOLOGICAL EDUCATION OF BLACK AMERICANS 4 (1992).

203. *Id*. at 4-5.

> Each of the major American export crops required its own particular skills, in cultivation, cropping, processing and transportation. And each slave settlement required that range of artisans whose abilities made possible the functioning of local economic and social life. Carpenters and masons, factory foremen, distillers, nurses and transport slaves all added their skills and working experiences to the well being of local slave society.[204]

As the colonies matured in the northern United States, and the enslaved population increased, the urban areas saw an increase in the skilled African American population.[205] The enslaved and free African Americans transferred imports and exports from ships, catered to the colonials, and developed to their new lives in urban setting. Colonial American towns increasingly became home to enslaved Africans with maritime skills,[206] such as coopers, printers, and sail-makers. There were also sailors who had access to the Chesapeake, Low Country of the Carolinas, islands of the Caribbean, and oceanic voyages of the Atlantic routes.[207]

On the eve of the American Revolution, slavery in North America was already 150 years old.[208] Slavery played a significant role in both the economic and social institutions in the thirteen colonies. African slaves were integral to the American way of life. One need only look at the tobacco grown in fields of Virginia and eastern North Carolina, which was picked and cured by the human cargo imported in slave ships fitted out in New England and sold to foreign and domestic buyers by merchants operating in every colony.[209] This position persisted well into the nineteenth century, and was ceded only after the conclusion of the Civil War.

Although the newly united colonies would lay claim to a movement founded in liberty, this concept would not include the enslaved Africans or freed Africans. After the 1700s and well into the early nineteenth century, the new country embraced the need for development and rapid expansion. Part of that need manifested itself through western expansion, political compromises to maintain the national unit, and faster innovative development.

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204. Verene A. Shepherd, *Trade and Exchange in Jamaica in the Period of Slavery*, *in* THE SLAVERY READER, *infra* note 211, at 158.

205. Davis, *supra* note 195, at 129 ("In eighteenth century New York and East Jersey, slaves could be found working at virtually every kind of job from building roads, clearing land, cutting timber for firework, and herding cattle and pigs in the countryside to such urban skilled occupations as carpentry, shoemaking, blacksmithing, stoneworking, butchering, milling, weaving, and even goldsmithing. Moreover, slaves and free blacks were especially evident as dockworkers, boat pilots and sailors.").

206. *Id*.

207. *Id*. at 129.

208. DAVID BRION DAVIS, THE PROBLEM OF SLAVERY IN WESTERN CULTURE (1966); *see also*, DAVIS, *supra* note 195, at 1 ("In 1770, on the eve of the American Revolution, African American slavery was legal and almost unquestioned throughout the New World. The ghastly slave trade from Africa was still expanding and for many decades had been shipping five Africans across the Atlantic for every European immigrant to the Americas.").

209. HORTON & HORTON, *supra* note 64, at 38.

The then-Chief Justice of the Supreme Court, John Jay, argued that "'prior to the great revolution…the great body of our people had been so long accustomed to the practice and convenience of having slaves, that very few among them even doubted the propriety and rectitude of it. . . .'"[210]

By the 1860's, four million African Americans,[211] roughly thirty-five percent of the United States' population, labored in bondage in the South. The cultivation of tobacco, sugar, rice, hemp, and cotton required brute force labor from this captive group.[212] During the same period, nearly 225,000 African Americans lived in the northern states subjected to oppression, racial discrimination, tyranny, forced segregation, and virulent racism.[213]

Slavery operated as theft, a systemic and compulsory transfer of wealth from the enslaved to the slaver. The slaver, in purchasing or owning the physical body of the enslaved, took the labor of the enslaved African, while simultaneously owning the personhood, progeny, products of their labor, and the profits of the enslaved African as well as that of his or her natal offspring. Also, the slaver owned the creative output of the slave. Tangential to this ownership was the slaver's ability to own and render unto themselves any intellectual output that his property may create.

C. Slavery and the United States Constitution

In 1787, the United States Constitution, which was drafted at the Philadelphia Convention to thwart dis-union among the newly Confederated states, was a social compact designed to ensure a strong national union and to support slavery.[214] To achieve the ideals of self-government, whites, as the elite class in control of the American colonial society, denied freedom to others in

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210. HUMMEL, *supra* note 193, at 9 (quoting John Jay, *Jay to the English Anti-Slavery Society, 1788*, THE CORRESPONDENCE AND PUBLIC PAPERS OF JOHN JAY 340, 342 (Henry P. Johnston ed., 1893)).

211. GAD HEUMAN & JAMES WALVIN, THE SLAVERY READER 81 (2003) ("The slave population of the United States was quite different from most other societies. It was, most crucially, a population which expanded. Though half a million Africans had been imported into North America, by the 1860s there was a slave population of almost 4 million."); *see also*, HOWARD ZINN, A PEOPLE'S HISTORY OF THE UNITED STATES 171 (2003) ("The United States government's support of slavery was based on an overpowering practicality. In 1790, a thousand tons of cotton were being produced every year in the South. By 1860, it was a million tons. In the same period, 500,000 thousand slaves grew to 4 million.").

212. TAKAKI, *supra* note 194, at 102.

213. *Id*. at 99 ("In 1860, 225,000 African Americans lived in the North. They were 'free', for the northern states had abolished slavery after the American Revolution. . . . Yet they were the target of virulent racism. . . . African Americans were only north of slavery. Indeed, everywhere blacks experienced discrimination and segregation. They were barred from most hotels and restaurants and were forced to sit in separate sections in theaters and churches, invariably in the back."); *see also* Ira Berlin, *Time, Space, and the Evolution of Afro-American Society on British Mainland North America*, *in* THE SLAVERY READER 123 (Heumam & Walvin eds. 2003) ("The nature of slavery and the demographic balance of whites and blacks during the seventeenth and first decades of the eighteenth centuries tended to incorporate Northern blacks into the emerging Euro-American culture, even as whites denied them a place in Northern society." (citation omitted)).

214. TAKAKI, *supra* note 194, at 99.

order to secure liberty for themselves.[215] Far from being conceived in liberty, the United States of America was dependent on forced labor.[216] This was, as some have called it, our original sin.[217]

Many of the drafters of the Constitution were slave owners, including George Washington, Patrick Henry, James Madison, John Jay, and Thomas Jefferson.[218] At least ten clauses in the Constitution drafted at the Philadelphia Convention directly or indirectly supported slavery in the United States.[219] Although those provisions explicitly supported the slavery status of slave holding states and together with the 'three-fifths' clause gave those state political clout in the bicameral government, other provisions indirectly guarded slavery.[220]

It is clear that slavery shaped American culture, economy, politics, and principles.[221] The American economy was itself founded on the production of slave-grown crops, namely tobacco, rice, sugar, and cotton, which slave owners sold on the international market to bring capital into the colonies and

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215. Wiecek, *supra* note 161, at 1792.

216. PETER KOLCHIN, AMERICAN SLAVERY, 1619-1877 (1993).

217. *See* THOMAS PAINE, AFRICAN SLAVERY IN AMERICA (1775); *see also* Christopher Hitchens, *In God They Trust*, SLATE (Nov. 21, 2011), http://www.slate.com/articles/news_and_politics/fighting_words/2011/11how_the_conservative_belief_in_american_exceptionalism_has_become_a_matter_of_faith_.html ("Of course, with any Eden there must be a serpent and an original sin. In the American case at least, Thomas Paine knew quite clearly what it was. The vile stain of slavery was present at every point, just as the awful profitability of cotton, and the easy availability of unpaid human labor from the African trade, corrupted the ideals of the new republic from the very first.").

218. GHOSH, *supra* note 73, at 1.

219. For a full discussion of this topic, *see* Chapter 3 of WILLIAM WIECEK, THE SOURCES OF ANTISLAVERY CONSTITUTIONALISM IN AMERICA, 1760-1848 (1977). (Article 1, Section 2, Clause 3 (apportionment of representation in the House based on counting all persons and three-fifths of the slaves); Article I, Section 9, Clause 5 when read in conjunction with Article I, Section 2, Clause 3 (requiring direct taxes be apportioned among the states on a three-fifths basis; preventing Congress from imposing a tax on slaves to encourage emancipation); Article I, Section 9, Clause 1 (preventing Congress from abolishing the international slave trade prior to 1808 (twenty years)); Article IV, Section 2 (prohibiting states from emancipating fugitive slaves, and implementing the fugitive slave clause, which required slaves to be returned to owners upon demand); Article I, Section 8, Clause 15 (Congress has the authority to muster the states' militias to enforce the law; this included stopping slave insurrections); Article IV, Section 4 (the federal government was obligated to protect the states against domestic violence; this too included slave insurrections); Article V (the specific clauses protecting slavery, i.e. Article I, Section 9, Clauses 1 and 4 (supporting slave trade and direct taxes could not be amended); Article I, Section 9, Clause 5 and Article I, Section 10, Clause 2 (prohibiting the federal government and states from taxing exports, including exports created by slave labor and other indirect taxes on slaves could not be had)).

220. FINKELMAN, *supra* note 179, at 7.

221. EDWARD R. BAPTIST, THE HALF HAS NEVER BEEN TOLD: SLAVERY AND THE MAKING OF AMERICAN CAPITALISM XXIII (2014) ("The returns from cotton monopoly powered the modernization of the rest of the American economy, and by the time of the Civil War, the United States had become the second nation to undergo large scale industrialization. In fact, slavery's expansion shaped every crucial aspect of the economy and politics of the new nation-not only increasing its power and size, but also, eventually , dividing US politics differentiating regional identities and interests, and helping to make civil war possible.").

the new Republic.[222] All of this occurred under the auspices of Anglo-American law. Slavery operated within a system of legal and customary limitations, restrictions and barriers for Africans in the New World colonies.

The Constitution was a pro-slavery governing document. It contained affirmative constitutional mandates and critical political endowments in favor of slavery.[223] Scholars have argued that there are three defining characteristics of a slave: "his person is the property of another man, his will is subject to the owner's authority, and his labor or services are obtained through coercion."[224] Slavery itself was the critical issue in the debates preliminary to the creation of the Constitution.[225] In a review of the debates at the Constitutional Convention, the commentary in *The Federalist Papers*, and commentary for the ratification of the Constitution in state conventions, it becomes patently clear that slavery was central to the debates that produced the Constitution.[226] The result was a constitutional protection for both slaveholding and slaveholders' rights[227] and, as will be soon discussed, a body of law evolved which protects to this day property holders interests above all else.

i. The Constitution's Principle Slaveholding Provisions

A closer review of the following articles gives a clearer picture of the degree to which the Constitution was pro-slavery social compact. Article I of the Constitution contains several of the most blatant pro-slavery clauses. Article 1, Section 9, Clause 15 contains the domestic insurrection clause[228] that gave the federal government, through Congress, the authority to call forth militia to suppress insurrections, which included slave rebellions. This provision compelled the newly created federal government and its military to defend itself against any liberation efforts by enslaved Africans or Indians.

Article I, Section 9, meanwhile, allowed the South to increase its power and hold on national governance (which would last nearly seventy-five years) by establishing a federal-state ratio. Article I, Section 9, "counted three-fifths of a state's enslaved population to determine a state's representation in the House of Representatives."[229] This federal state ratio also applied to direct

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222. Ira Berlin, *Coming to Terms with Slavery in Twenty-First Century America, in* SLAVERY AND PUBLIC HISTORY: THE TOUGH STUFF OF AMERICAN MEMORY 2 (James Olives Horton & Louis E. Horton eds., 2006).

223. ERWIN CHEMERINSKY, CONSTITUTIONAL LAW: PRINCIPLES AND POLICIES 707-8 (4th ed., 2011).

224. DAVIS, *supra* note 195, at 31.

225. Juan F. Perea, *Race and Constitutional Law Casebooks: Recognizing the Proslavery Constitution*, 110 MICH. L. REV. 1123, 1148 (2012).

226. *See* Const. Convention; THE FEDERALIST PAPERS.

227. VAN CLEVE, *supra* note 56, at 179 (internal quotes omitted).

228. U.S. CONST. art. I, § 8, cl. 15.

229. HUMMEL, *supra* note 193, at 11; *see also*, U.S. CONST. art. I, § 9.

taxes.[230] As a political slave to the slave-holding states, Article I, Section 9 provided that Congress could not outlaw slavery until 1808.[231] In effect, this allowed slave-holding states to increase their mercantile runs, establish new trade alliances and gather increasing political clout with foreign trade partners for another twenty years.

Article I, Section 9, Clause 5 prohibited the federal taxation on exports which, in effect, prevented an indirect tax on slavery.[232] This clause prohibited the new nation from taxing the products of slave labor, such as tobacco, rice, and cotton.

Article II, Section 1, Clause 2 established and based the Electoral College based on congressional representation.[233] This clause incorporated and applied the three fifths clause into a powerful block in the executive branch, giving whites in slave states a disproportionate amount of political clout in the election of the president.

Article IV, Section 2 required the re-enslavement of fugitive slaves, "No Person held to Service or Labour in one State, under the Laws thereof, escaping into another, shall, in Consequence of any Law or Regulation therein, be discharged from such Service or Labour, but shall be delivered up on claim of the Party to whom such Service of Labour may be due."[234]

Article IV, Section 3, Clause 1 provided the method for admission of new states into the union.[235] The establishment of newly organized slave states was an anticipated event and this clause provided no barriers to such entry.

Article IV, Section 4 is the infamous 'domestic violence' clause, which now guaranteed that the United States would protect states from domestic violence, translation slaves insurrections.[236]

Article V of the Constitution prevented Article I, section 9 from being eliminated or changed by constitutional amendment.[237] Article V, protecting slavery, acted as a supra-constitutional agreement not subject to change or amendment by any means.

ii. Pro-Slavery Provisions and Policy

After the Revolutionary War, the new confederation had many issues to confront and resolve. There were debts left over from fighting the War of Independence from Great Britain. There were hostile neighbors, including

230. U.S. CONST. art. I, § 9.
231. *Id.*
232. U.S. CONST. art. I, § 9, cl. 5.
233. U.S. CONST. art. II, § 1, cl. 2.
234. U.S. CONST. art. IV, § 2.
235. U.S. CONST. art. IV, § 3.
236. U.S. CONST. art. IV, § 4.
237. *Id*.

multiple communities of Amerindians, settlements established by the Spanish and French, and even post-war intermeddling by the British. There were also domestic governmental issues lying beneath the loosely joined country. Former colonies with long histories of self-governance had been joined into a newborn and somewhat fragile alliance. At the dawn of the nineteenth century, North America was indeed in need of development, expansion, and capital security. To cement the union, the founding fathers designed a government, which supported the ultimate mercantile society, a society reaping profits from free labor and the products of capital produced in expansion.

The Industrial Revolution and technological advancements fueled investments in Britain and the rest of Europe. These innovations posed one of the sure methods to develop vast lands, claim areas of conquests, and keep pace with an ever-present European threat to the burgeoning American way of life. Tellingly, the struggling new republic would fight the War of 1812 over these issues.[238]

Yet slave labor, capital, and rents required innovation and increasing technological advancements to keep pace with a worldwide global emerging economy. In order to keep pace with developing technological advancements, the drafters of the Constitution were aware of the need for innovation, creativity and inventiveness in a new nation. For this, the drafters of this new Constitution turned again to the English common law, enabling existing copyright structures to immigrate to North America.[239] In fact, the drafters, with little or no debate, agreed on the Constitutional mandate, Article I, § 8, cl. 8, which has come to be called the Copyright and Patent Clause. This clause grants inventors and creators an "exclusive right" for "limited times" to the rights in their works.[240] It also supports, after the expiration of those times, a reversionary interest in the public commons.[241]

In a careful reading of the historical record, it appears that, as with slavery, the drafters of the Constitution were acting for the benefits of the vested money classes in providing a proprietary interest to innovators and creators for limited periods of times. Of special note, the copyright and patent regimes, as a subset of intellectual property, operated as a part of a complex adaptive legal ecosystem in the eighteenth and nineteenth centuries. Slavery and slave law were firmly entrenched as of 1790 and existed as major forces

238. HOWARD ZINN: A PEOPLE'S HISTORY OF THE UNITED STATES 98 (Abridged Teaching. ed. 2003) ("[Andrew] Jackson was a land speculator, merchant, slave trader, and the most aggressive enemy of the Indians in early American history. He became a hero of the War of 1812, which was not (as usually depicted in American textbooks) just a war against England for survival, but a war for the expansion of the new nation into Florida, into Canada, into Indian territory.").

239. TUSSEY, *supra* note 160, at 37.

240. U.S. CONST. art. I, § 8, cl. 8.

241. GHOSH ET AL., *supra* note 73, at 79-82.

upon which intellectual property law (as did all other legal regimes) interacted. To opine that the drafters of the Intellectual Property Clause were not aware of slavery and slave law is to ignore the historical record. Recall that George Washington, Thomas Jefferson, James Madison, and John Rutledge were just a few of the many founding drafters who were slave owners.[242] The question remains: How, and to what extent, do the remnants and residuals of that ecosystem continue to operate today?

Almost immediately after the ratification of the U.S. Constitution, Congress passed the first Copyright Act. "Like much of English law, copyright law immigrated to North America with the English settlers. . . . The 1790 Copyright Act . . . is modeled on England's Statute of Anne."[243]

The 1790 Copyright Act recognized books and papers.[244] Knowledge of medicines, written treatises for learning, books and drawings of zoological natures were all to be given copyright protection. However, medicines appropriated from indigenous peoples and transcriptions of curative matters were not considered copyrightable. Only the original Copyright Act only protected information contained in a fixed form. Further, even that fixed form would not be protected if it originated outside of the colonies of North America. Only materials written and protected under the United States copyright laws could receive protection.

In 1790 the first federal Copyright Act included the preamble, "An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned."[245] The act secured federal protection for copyrights for twenty-eight years from the date of recordation and after adherence to specific formalities.[246] The following critical provision appeared in this copyright statute:

[N]othing in this act shall be construed to extend to prohibit the importation or vending, reprinting, or publishing within the United States, of any map chart, book or books, written, printed or published by any person not a citizen of the United States, in foreign parts or places without the jurisdiction of the United States.[247]

This provision, enacted by Congress, encouraged the unrestricted license for Americans to re-print and publish foreign works by prohibiting copyright

242. CHEMERINSKY, *supra* note 223, at 708; *cf.* DONALD L. ROBINSON, SLAVERY IN THE STRUCTURE OF AMERICAN POLITICS, 1765-1820 209-10 (1971).

243. TUSSEY, *supra* note 160, at 37.

244. Act of May 31, 1790, ch.15, preamble, 1 Stat. 124.

245. *Id*.

246. *Id*. at §§ 1, 3, 1 Stat. 124.

247. *Id.* at § 5, 1 Stat. 124.

protection for foreign works.[248] Affirmative language contained within the preamble stated that a non-U.S. citizen was not protected by copyright in the United States. This initial copyright statute therefore provided authors who were citizens and residents a fixed period for ownership in their works (twenty-eight years) before expiration, while simultaneously denying copyright protection to works authored by foreign authors.[249] This effectively created a public domain in the United States commons through a statutory exclusion based on citizenship.

The public domain has been given various definitions. But, a good working definition, as Spoo states, is that of a "common pool of works that are not protected by copyright in a given country, either because they were created before the advent of copyright laws[,] or because the copyrights they once enjoyed have naturally expired[,] or because they have prematurely forfeited or do not qualify for copyright protection."[250]

Historically, the works of enslaved African Americans were treated much like the works of foreigners. That is to say, works penned or otherwise created by slaves would not have received copyright protection, as these authors and innovators were non-citizens or non-residents prior to the Thirteenth Amendment grant of citizenship status.[251]

Lest there be any cause for debate, Congress passed another act in 1793, The Fugitive Slave Act of 1793, which required the judicial enforcement of slavery. It did not matter to which venue a slave escaped; judges were required to return him or her to their rightful slave owner. As Chemerinsky opines, "The importance of slavery as a social and political issue during this period cannot be overstated. Every discussion of the relationship between the federal and state governments was directly or indirectly about the slavery question. It was the central dispute of the time and affected almost all other issues."[252]

In 1819, Congress passed the Missouri Compromise Act.[253] The act was designed to avoid a national schism over the admission of states into the union which were either free or slave, thereby lending unequal grants of

248. ROBERT SPOO, WITHOUT COPYRIGHTS, PIRACY, PUBLISHING AND THE PUBLIC DOMAIN 13-64 (2013).; *cf*. MARGARET MCGILL, AMERICAN LITERATURE AND THE CULTURE OF REPRINTING, 81 (2007).

249. *See* SPOO, *supra* note 248.

250. *Id*. at 30.

251. *Id*. at 67, 69 ("Beginning in 1891, authors, foreign and domestic, could obtain U.S. Copyright by having their books manufactured from type set within the United States or from plates made from such type. Congress retained these requirements when it enacted, in 1909, the first significant revision of the copyright law since 1891 . . . [called the Manufacturing Clause; however,] by satisfying the requirements of several linked provisions, the author of an English language book or periodical produced abroad could acquire statutory copyright protection [under a provision called] [a]d interim protection . . . [which unfortunately] did not always work.").

252. CHEMERINSKY, *supra* note 223, at 709.

253. Act of March 6, 1820, 3 Stat. 545.

electoral power. The idea was to admit Missouri as a slave state and prohibit slavery in territories north of the latitude of 36° 30′. Territories below the line could decide their own status for admission: free or slave.

But, in *Dred Scott v. Sandford,* the Supreme Court declared that the Missouri Compromise was unconstitutional.[254] But more consequential was the Court's draconian holding that slaves were property and not citizens. The Court held that when the Constitution was ratified, slaves were considered "a subordinate and inferior class of beings, who had been subjugated to the dominant race and whether emancipated or not remained subject to their authority," nor any "rights or privileges but such as those who held the power and the Government might choose to grant them."[255] Far worse, however, was the declaration that a slave had "no rights which the white man was bound to respect."[256] As a result, slaves could not sue in federal courts or invoke federal court diversity of citizenship jurisdiction.

This ruling and its ultimate progeny extended to the then existing and later developing intellectual property laws. In the period preceding the Civil War, the United States, through the U.S. Patent Office, refused to accept or recognize inventions made by enslaved African Americans. The Patent Office maintained this stance even when the owners of the enslaved Africans wanted to file for patent rights in their names.[257]

The fledgling Confederate States of America took an opposing view, but one in line with ownership of the personhood of the African Americans. Shortly after the beginning of the Civil War, the Confederate States enacted The Confederate Patent Act.[258] Section 50 of the Act gave the slave owner the right to patent an invention or discovery for art machine or improvement, as long as the owner took an oath stating that the slave was the original inventor.[259] The act gave the owner, after compliance with patenting requirements, the patent and all the rights which attached to the patent.[260] This appeared to also be in line with the South's attempt to reap production and mobilize technology in the coming days of war. This action was not designed to credit the slaves with the products of his or her labor, but was instead designed to enhance the fruits of the patents for the slave owner.

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254. *Dred Scott v. Sandford*, 60 U.S. 393 (1857), *superseded by constitutional amendment*, U.S. CONST. amend. XIV.

255. *Id*. at 405.

256. *Id*. at 407.

257. *The Confederate Patent Act*, *in* A HAMMER IN THEIR HANDS: A DOCUMENTARY HISTORY OF TECHNOLOGY AND THE AFRICAN AMERICAN EXPERIENCE 89 (Carroll Pursell ed., 2005).

258. The Confederate Patent Act, § 50, May 21, 1861.

259. *Id*.

260. *Id*.

iii. Political Inequality as a Springboard for Capital Inequality

The Revolutionary War, which was fought in a protracted struggle beginning in the 1760s and extending through the early 1780s, ultimately resulted in the overthrow of British rule. This struggle was designed to empower the common white man. The framing of the argument for liberty from Britain was that independence was necessary to restructure government, in order to ensure responsiveness to the will of the people.[261] Prior to the Constitutional Convention, republican ideals articulated in state governments, such as Pennsylvania, heralded democracy in government.[262] Yet, the Declaration of Independence espoused the arguments for liberty while housing them in blatant contradictions to liberty. Those ideals were secured for white men and not for enslaved Africans, Amerindians, or women. Both before 1776 and during the revolution, elite and ordinary folk, particularly the common white man, united behind the belief that only an equal distribution of wealth would protect freedom and keep Democracy healthy.[263]

In the waning years of the War for Independence, many of the gentry began embracing ideals and policies that they had once denounced as British oppression. Frightened by the upheavals of war and spurred by a heightened sense of social status, many of [Pennsylvania's] self-styled gentlemen abandoned their commitment to extending political and economic power to ordinary folk. Instead, they adopted a new ideal of 'good' government based on concentrating both political and economic might in the hands of the elite. They launched a prolonged attack on popular ideals and the democratic achievements of the Revolution, attempting to undo reforms that many of them had helped to create. In this sense, the postwar period was essentially a replay of the 1760s and the 1770s with the revolutionary gentry playing the role of Britain.[264]

Our present structure of centralized governmental power, as divided between the federal and state governments, was born from these early beginnings. This consolidation of power by the founders, who were themselves of elite status, effectually created a structure that prevented any popular overthrow or substantial changes—other than sweeping an election. As Bouton notes, "the frustrations in getting change through the federal and state system helps to explain why so many reform movements—from the Jacksonians to the Populists to the Progressives to the modern labor, civil rights and women's movements—have placed removing or at least minimizing those

261. BOUTON, *supra* note 44, at 257.
262. *Id*.
263. FINKELMAN, *supra* note 179.
264. *Id*.

barriers at the center of their efforts."[265] This would also explain, Bouton continues, why those in power so often erect new technical, political, or governmental barriers to ensure that their control is unchecked.[266]

iv. Capital and Wealth Inequality

In 1834 and 1835, two patents on corn harvesters were granted to one Henry Blair, presumably a "free person of color" from Maryland.[267] This isolated example of a legal patent exemplifies the paucity of grants to persons of color. Africans were involved in producing, building, mining, farming, and industrial work. Invention may have been a necessity, but it was hardly a right.

Many platforms, including a wide array of books, documents, and articles, have held forth on the ongoing discussion of slavery, slave holding interests, and the failure of the American Constitution to provide individual liberties to Africans, women, and Amerindians. Today, however, there is the need for economists and legal scholars to address the economic impact of slavery and the Intellectual Property regime in the United States is long overdue.

Author Lisa Cook, in an incisive work, demonstrates that in the decades following reconstruction, patenting rates among African Americans were similar to those of the larger inventor community.[268] However, black inventors were adversely affected by race-related violence, which caused a large disparity in patenting rates between black and white inventors.[269] In effect, mob violence, racial riots, segregation laws, sundown towns, and the racial cleansing of communities caused precipitous declines in patent productivity for black inventors. Cook compares the decline in black utility patenting rates with recorded acts of racial violence, mob violence, riots, and lynching, as well as against a wide landscape of segregation and discriminatory laws. The correlation is astonishing. Cook's studies show appreciable disparities between black patenting productivity and white patentees based solely on violence exerted toward African Americans.[270] In other words, as racial violence and discriminatory practices increased in a given area, black patent numbers fell. White patents, meanwhile, rose in proportion.

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265. BOUTON, *supra* note 44, at 264.

266. *Id*.

267. *Id*.; *see also* FINKELMAN, *supra* note 179.

268. Cook, *supra* note 43, at 222-23 ("Following the emancipation of slaves after the Civil war, race related violence escalated in the south in the 1870s and spread to other parts of the country by the end of the nineteenth century. Such conflict was often related to the absence or diminished enforcement of the rule of law. Major race riots are one indicator of hate related violence as reported in Table 1, these events were occasionally politically motivated and were sometimes associated with mob violence and election disputes; blacks were usually, but not always, the targets of race riots.").

269. *Id*.

270. *Id*. at 227, Figure 1.

Often the exploitation of a patent to produce income was stymied because the channels of distribution of the patented product for the successful patentee required access traditionally reserved for whites only.[271]

African American patentees have been used by various scholars to re-enforce a Horatio Alger myth.[272] This notion can be extended to the African American patent seeker. Meaning, in spite of crippling racism, oppressive discrimination, and periodic ethnic cleansing, a black inventor can rise to unheralded heights of financial achievement through hard work.[273] Nothing could be further from the truth.[274] As one author, Rayvon Fouche, pointedly wrote:

> Historians have ignored technology as an institutionalized force that marginalizes black people within American society and culture. Many scholars have overlooked technology because of the perception that it is just "stuff" and therefore value-neutral, non-gendered and non-racist. This perception allows the unproblematic acceptance of technology as a simple black box, which, in turn, supports the assumption that technology can be fully understood by its most simple material form and function. The belief in the uncomplicated meanings of technology promotes the misperception that technologies have one real meaning. Yet this is far from true. In American society, the automobile's dominant meaning is most closely understood as a device that transports people from one location to another. But automobiles have many more complicated meanings within our culture, from a status symbol to a weapon that can kill. When human actors interact with technology, they reinforce, redefine, or subvert the technology's dominant meaning or function. Since technologies traditionally do not design and build themselves, they usually do not exhibit biases on their own. Thus, in a built technological world, human agents must not ignore their place in the

271. PORTIA P. JAMES, THE REAL MCCOY: AFRICAN AMERICAN INVENTION AND INNOVATION, 1619-1930 14-15 (1989) ("By the beginning of the twentieth century, however, the profile of the successful inventor began to change. Many inventors became entrepreneurs, spending as much or more energy on marketing, promotion and distribution of their innovations as they did on inventing and manufacturing them. The rise of twentieth century corporate enterprise also led to more centralized research." "As technology became more complicated, inventors in emerging fields began to have more formal education. Advanced degrees in engineering and the sciences were necessary to participate in these new technologies. Blacks found it difficult to get access to higher education and also found it difficult to obtain research staff positions." In fact, the apartheid like segregation laws prevented Blacks from attending engineering or technical schools with adequate resources. Corporations refused to hire and access to shops were denied to all but a slight few.).

272. The "Horatio Alger Myth" is a literary reference based on a nineteenth century children's book writer of the same name. Angers often introduced characters who attempted to work their way up from poverty or low social status through diligent and hard work, often to no avail. Rather, the character would often find themselves in the company of a wealthy individual who, after taking a liking for the young person, would provide some form of financial or capital benefit.

273. RAYVON FOUCHE, THE BLACK INVENTORS IN THE AGE OF SEGREGATION 183 (Granville T. Woods et al. eds., 2003) ("The most important thing, outside of the black inventor mythology, that binds these men together is race and the tragedy of racism in America, which is the defining characteristic of the black inventive experience before and after the twentieth century.").

274. *Id*.

> construction of the forms and the production of the meanings of the technology. Technology in American society is one of the most efficient systems for transmitting asset of ideological beliefs.[275]

The wealth provided by intellectual property protections was removed and kept out of the reach of most African Americans from the moment their stolen bodies arrived in the early seventeenth century and through the end of the twentieth century. Part of the historical, economic, and accounting research needs to address the losses attributable to the preclusion of African Americans from the copyright and patenting regimes.

As we return to the interconnectivity and the technological inventions of the twenty-first century, the issue arises as to who owns the technical progress. The technological inventions governed by the patents, which give rise to the above-mentioned thermostats, are derived from inventions and advances built upon technological improvements made by individuals who often did not have access to the patent system, much less the ability to commercially exploit their inventions. The music and songs recorded and owned by major companies were often the work of artists' who signed away rights, or the product of a collaborative approach to music utilized by artists in jazz, blues, rhythm and blues, hip hop, and country. The development of agricultural benefits may spring from large agri-conglomerates, but farmers and workers tilled and improved techniques and scientific agro-practices decades before these ideas were privatized by large corporate interests.

This is not merely a clarion call to address ancient deprivations. Currently, the assignment of rights and benefits through the property-based approach dictated by our IP laws lack any attendant protection for the individual. Under a parallel 'progress' approach (initiated by the human capital interests of slavery embedded in the U.S. Constitution), these same laws have underserved the interests of a large segment of the population. By miscalculating the costs in the transfer of wealth (caused by the propertization of the intellectual property regimes), society increasingly impoverishes a large segment of the population. The wealth accumulated by the holders of the property interests (driven by corporations and the growing wealth divide) deprives the individual of a greater income gain. Technology advances and the information economy increasingly control this income divide. Individuals become captives of an eco-system where connectivity becomes increasingly necessary for survival. Connectivity in turn, which is itself dependent upon technology fueled by maximalist intellectual property protections, increasingly raises the cost of access to the individual (privacy, rents, etc.), as compared with the potential benefits. Connectivity costs for those who have less income/wealth are higher due to a variety of factors including cable bills, throw

275. *Id*. at 2 (citations omitted).

away telephones, and transportation costs to purchase processed food sold in grocery ghettoes. The costs, but not the profits, rise disproportionately to the individuals' incomes, where labors' wages have declined.

VI. CONCLUSION

This review of the U.S. Constitution, the Intellectual Property clause, and the clause's origin, serves to highlight a hidden motivating force within our chief social compact and governing document. This requires a close analysis of our current IP laws to ensure that the focus does not serve to create an income/wealth divide that is obscured by market driven consumption without scrutiny.

The area of connection between intellectual property and income distribution deserves more study and an empirical assessment of the distributive costs of a racialized system to the deprived. Simultaneously, a completed assessment of the costs and benefits to the consuming public of the complete interconnectivity of modern life must be addressed. Predictions about hacking, which affects privacy, public elections, and consumer safety, are no longer future horror tales.[276] They are a present reality.

Akin to the brutal institution of slavery, income/wealth inequality impedes the access of African Americans to resources which will otherwise help them attain intellectual property rights over their inventions and creative works. Moreover, this denial of access is comparable to the free labor African American slaves had to endure while being denied their intellectual property rights in the 1800s. Because our income/wealth divide continues to grow, more must be done to ensure that the costs of interconnectivity do not deprive inventors or creators of their intellectual property rights in the United States. If not, the drone which earlier dispensed an herbicide may well dispense the only food allotments on neighborhood corners to the consuming public. Our connected homes may be rental homes owned by the connectivity servers and entry may only be accessed through their electronic sensors. The only jobs available in a scarce employment climate may be allotted via an algorithmic program. Music may be a product of the electronic sensor located on every street corner. The calculus involved in determining who belongs on what side

276. Tara Siegel Bernard et al., *Equifax Says Cyberattack May Have Affected 143 Million in the U.S.*, N.Y. Times, Sept. 7, 2017, at A1; Joseph Menn and Dustin Volz, *Uber Paid A 20-Year-Old Florida Man To Keep Its Data Breach Secret—Sources*, Reuters (Dec. 6, 2017), https://www.reuters.com/article/us-uber-cyber-payment-exclusive/exclusive-uber-paid-20-year-old-florida-man-to-keep-data-breach-secret-sources-idUSKBN1E101C; *Yahoo 2013 Data Breach Hit 'All Three Billion Accounts'*, BBC News (Oct. 3, 2017), http://www.bbc.com/news/business-41493494); Nicole Perlroth, Michael Wines and Matthew Rosenberg, *Russian Election Hacking Efforts, Wider Than Previously Known, Draw Little Scrutiny*, N.Y. Times, Sept. 1, 2017, at A1.

of the wealth divide may well depend upon how the interconnectivity of everything is defined in relationship to the intellectual property regime.

As I indicated in the beginning of the article, this paper serves to introduce the initial premise that the intellectual property laws currently existing in the United States—patents, trademarks and copyrights—were created and grounded in an economic regime which not only maintained but was founded in and supported by slavery and the subjugation of Africans, Amerindians, and people of color. This economic regime, grounded in slavery, fostered the initial capital and wealth inequality in the United States. Because our intellectual property regimes were founded in slavery and racial oppression, it is only natural that they too give rise to present and future racialized inequalities.