
Distributive and Syncretic Motives in Intellectual Property Law (with Special Reference to Coercion, Agency, and Development)

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If I am critical of those who seem eager to defend a world of discrete, perfectly bounded cultures that never existed, it is because I am so impressed by the hope and pragmatism of indigenous elders, museum curators, archivists, and cultural-resource managers who are negotiating their way to more balanced relationships. They, far more than the activists and academic theorists who set the terms of the debate about cultural ownership, understand that progress will be built on small victories, innovative local solutions, and frequent compromise. They recognize, too, that a world ruled solely by proprietary passions is not a world in which most of us want to live.¹

INTRODUCTION

Questions. This Article examines significant recent work by Professors Margaret Chon, Anupam Chander, Madhavi Sunder, Ruth Okediji, and others focusing on the distributive effects of both domestic and international property regimes, and extends their analysis by looking at three examples. Two of these examples are historically instructive about relationships between race, labor, creative genius, and U.S. intellectual property (“IP”) law. The first comes from the antebellum era, during which slaves were not legally recognized as possessing creative and inventive agency of their own. This example questions how we are to understand the cotton gin, patented by the iconic Eli Whitney and subsequently used to extend and expand the economic viability of plantation slavery. However, some historians believe the cotton gin was invented by “Sam,” a slave who sought to meliorate harsh labor conditions. The second example raises the question, “Who owns the blues?” What effect, if any, did the fact that copyright protection was obtained for only certain types of musical works during this era have on the development of the blues as a distinctive musical tradition? Finally, the third example looks to the contemporary context of plant germplasm influenced by collective contributions over millennia from throughout the world. Why should discrete modern innovations to agricultural crops be protected by forms of IP law while the contributions of hundreds of generations of farmers, including those in the present day, go unacknowledged and uncompensated? While the answers to these questions partially turn on issues of legal recognition and attribution, should such recognition and attribution necessarily entail expanded IP rights?

¹ MICHAEL F. BROWN, WHO OWNS NATIVE CULTURE? 252 (2003).

Syncretism. While these three examples are disparate in time and space, this Article argues that distributional considerations cannot be dealt with in a “one-size-fits-all” procrustean IP framework. Instead, this Article argues for a syncretic approach that attempts to resolve, or at least recognize, differences in culture, geography, and development while tolerating or even encouraging heterogenous results.² Rather

² Syncretism is the “[r]econciliation or fusion of differing systems of belief, as in philosophy or religion, especially when success is partial or the result is heterogeneous.” Answers.com, Syncretism, <http://www.answers.com/topic/syncretism> (last visited Jan. 26, 2007); see also Wikipedia, Syncretism, <http://en.wikipedia.org/wiki/Syncretism> (last visited Jan. 26, 2007) (“Syncretism consists of the attempt to reconcile disparate, even opposing, beliefs and to meld practices of various schools of thought. It is especially associated with the attempt to merge and analogize several originally *discrete* traditions, especially in the theology and mythology of religion, and thus assert an underlying unity.”). I believe the parallel between different worldviews or belief systems and IP regimes is obvious.

For examples of syncretism involving slave refashioning of dominant, Christian religious narratives, see EUGENE D. GENOVESE, ROLL, JORDAN, ROLL: *THE WORLD THE SLAVES MADE* 7 (1972) (“Southern paternalism may have reinforced racism as well as class exploitation, but it also unwittingly invited its victims to fashion their own interpretation of the social order it was intended to justify. And the slaves, drawing upon a religion that was supposed to assure their compliance and docility, rejected the essence of slavery by projecting their own right and value as human beings.”). See generally C.L.R. James, *The Black Jacobins*, in *THE C.L.R. JAMES READER* 67 (Anna Grimshaw ed., 1992); Lizette Alvarez, *A Once Hidden Faith Leaps into the Open*, N.Y. TIMES, Jan. 27, 1997, at B1 (“For decades, Santeria has operated in a muted underground [in New York City], its rites confined to basements and living rooms far from the condemning eyes of outsiders who labeled it hoodoo. . . . [S]anteria was born among the West African Yoruban people who were taken to Cuba as slaves from the 16th to the 19th century. . . . Forced to conceal their religious traditions, the santeros cloaked their faith in Roman Catholic imagery. Chango, god of thunder and lightning, for example, was worshipped in the image of Saint Barbara, whose father was struck down by lightning as he beheaded her for her faith. This melding became known as Santeria, the worship of the Saints. It is not uncommon to find santeros lining the pews of a Roman Catholic Church or a devout Catholic dropping in on a Santeria priest for advice.”). On the contrast between the experience under the U.S. versus the Caribbean and Latin American slave experience, see generally Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah, 508 U.S. 520, 541 (1993); JOSEPH M. MURPHY, *SANTERIA: AN AFRICAN RELIGION IN AMERICA* (1988); ABDIAS DO NASCIMENTO ET AL., *AFRICANS IN BRAZIL: A PAN-AFRICAN PERSPECTIVE* (1992); ALBERT RABOTEAU, *SLAVE RELIGION: THE “INVISIBLE INSTITUTION” IN THE ANTEBELLUM SOUTH* (1980).

Syncretism in the context of IP may imply a “TRIP[S] by day, local knowledge by night” in the way that Caribbean understanding of variants of the West African Yoruban belief system reconcile themselves with “Christianity: Catholic by day, Santeria by night.” In the context of plant genetic resources, the “Common Heritage” approach has the virtue of promoting widespread diffusion and utilization of diverse genetic materials utilized in situ rather than stored in gene banks. See *infra* note 17.

Syncretism is also associated with the tropes of Creolization and hybridity in the

than taking an $A + B = A$ approach, in which A = western IP laws, and B = local conditions and understandings about local practices giving rise to putative (intellectual) properties, this Article attempts to advance a meaningful $A + B = C$ (or C and D) approach.

Property and Intellectual Property? Is “property” an on/off-either/or institution, or is it susceptible to extensive tailoring that furthers or discourages particular social or political agendas?³ Whether discussing “property” in slaves, music, or plant germplasm, “property” is a term that involves a complex mix of assumptions, metaphors, and analogies and that obscures as much as it reveals. “Intellectual property” only compounds this complexity and sometimes causes us to underestimate the full range of options we may employ to effectively pursue distributive or utilitarian policy goals. The example of patents illustrates this problem. Over-reliance on metaphors from the area of physical property in the area of IP tends to make us forget that for much of patent law history patent grants were conceived of as monopoly grants, not property.⁴ The idea that patents were seen as monopoly grants points to the various costs connected with intellectual property, i.e., barriers to cumulative social innovation, opportunistic rent-seeking, and dead-weight losses.⁵ As Joseph Singer points out, there is no transcendental package of entitlements that constitute a universal idea of “ownership” — there are simply many contingent potential “rights, powers, privileges and immunities” that may be combined to comprise what we legally come to understand as “property rights,” and such choices are inherently political.⁶ Physicalist notions of property further obscure the political nature of fabricating such “bundles of rights” in the area of IP.

Technology, IP Law, Race, and Nation. This Article uses three examples to explore the question of the distribution of IP law’s benefits and burdens through the lenses of technological and intellectual change (including what is considered protectible as IP),

area of folklore studies. See, e.g., Robert Baron & Ana C. Cara, *Introduction: Creolization and Folklore — Cultural Creativity in Process*, 116 J. AM. FOLKLORE 4 (2003) (noting distinct lack of homogeneity of “folk” cultures).

³ See Dan Burk and Mark Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1630-31 (2003).

⁴ See BRUCE W. BUGBEE, GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 6-9 (1967); Frank D. Prager, *A History of Intellectual Property from 1545 to 1787*, 26 J. PAT. TRADEMARK OFF. SOC’Y 711, 711 (1944).

⁵ See William W. Fisher & Talha Syed, *Global Justice in Health Care: Developing Drugs for the Developing World*, 40 UC DAVIS L. REV. 581, 667-74 (2007).

⁶ See JOSEPH WILLIAM SINGER, ENTITLEMENT: THE PARADOXES OF PROPERTY 32 (2000).

racial subordination, and structural subordination among nation-states arising as a legacy of European colonialism.

Slavery and the Invention of the Cotton Gin. The first example, discussed in Part II of this Article, concerns the invention of the cotton gin and the role of black inventors in the early days of the American patent law system. The cotton gin was cutting-edge technology in the 1790s, and Eli Whitney availed himself of the nascent U.S. patent system. The cotton gin also served to perpetuate the antebellum chattel slavery regime for several decades. Although the patented invention is attributed to Whitney, its origin has provoked some skepticism about Whitney's claim to invention.⁷ As such, this example highlights the relation among race, technology, and IP law to show how these factors interacted in a harsh and brutal way. To what extent did the young and resolutely utilitarian American patent system exclude certain persons and groups from its incentives, particularly black slaves? Because slaves were property, they held no legally recognized rights of any kind — not in their own labor or its products, nor in their inventive capacities or cultural products. Rather, a slave's labor belonged to the slaveowner. Furthermore, in this era race and caste were so strongly linked as to render slaves legally bereft of the requisite inventive agency to possess a patentable idea. At this time, it was inconceivable that a slave could own a patent, even though a slave may have invented the cotton gin, which eventually was used in extending the economic life of plantation slavery. What role, then, did patent law play in facilitating an economic and social system premised on chattel slavery? For example, did it render or preserve a slave's inventive ideas as a free resource for the slaveowner's appropriation? What channels did slave innovation take as a result? In retrospect, this omission from the history of patent law is glaring. What other omissions might exist in our current body of IP law? This Article suggests that there exists a blind spot pertaining to the distributive effects of these laws.

Who Owns the Blues? The second example, appearing in Part III, examines the emergence of the black idioms of jazz and the blues in the southern United States around the beginning of the twentieth century, and the subsequent transformation of these musical forms into big business spurred by the rapid advance of fixation and media reproduction technology. Were these technological and market changes race-neutral or did they skew along racial lines? Included in

⁷ See ANGELA LAKWETE, *INVENTING THE COTTON GIN: MACHINE AND MYTH IN ANTEBELLUM AMERICA* 177 (2003).

Part III is a discussion of the historical roots of copyright law and its role in the emergence of the blues, with attention to the traditional story about the one-way appropriation of black blues musicians' works by white artists. Also included is a discussion of the relative absence of un-notated music created in folk traditions and its exclusion from IP protection during the late nineteenth and early twentieth centuries. Paradoxically, the "public domain" seems to have engulfed the Delta Blues. The lag between technology and copyright created a racialized dimension that gave rise to white cultural entrepreneurs appropriating and exploiting musical works from black musicians. However, the absence of copyright may also have been a factor in hybrid and syncretic practices among black musicians that helped give birth to the blues and other historically black-identified musical traditions. This highlights the important difference between profit-making by those external to these traditions and meaning-making by and for those internal to them. If the problem is thus not appropriation per se but rather white appropriation and exploitation of elements of the blues, then it is important to ask whether the solution necessarily involves creating more IP rights and structures. Doing so may actually hinder the kind of vibrant, appropriationist cultural practices that created the blues in the first place.

"Seed Wars."⁸ The third example, discussed in Part IV, describes the contemporary debate over IP rights in seed germplasm.⁹ In certain respects, this situation harkens back to slavery and other racial structural subordination. Hundreds of generations of farmers and members of agricultural collectives throughout the world, both free and enslaved, contributed immeasurably to the development of staple crops and seed germplasm. Contemporary industrialized countries and multinational corporations have appropriated these crops as IP-protected plant genetic resources ("PGRs"). Arguably, the commodification of PGRs via the U.S. patent system and the minimum standards of IP protection under current international treaties allow corporate gene giants such as Monsanto to lock developing nations into structural dependence on high-input agricultural systems premised on patented plant genetic technologies. In this debate, seed

⁸ See generally JACK RAPLH KLOPPENBURG, JR., *FIRST THE SEED: THE POLITICAL ECONOMY OF PLANT BIOTECHNOLOGY, 1492-2000* (1988) (describing conflict relating to access to, control over, and preservation of plant genetic resources); Bill Paul, *Third World Battles for Fruit of Its Seed Stocks*, WALL ST. J., June 15, 1984, at I ("You have heard of 'Star Wars.' Now there are seed wars.").

⁹ Germplasm is the complement of genes that determine an organism's characteristics.

germplasm has gone from being legally characterized as the “common heritage of humankind” (i.e., common in the global public domain), to being legally characterized as “sovereign national property” in a 2001 multilateral treaty.¹⁰ The public domain in this area was seen as too expansive, threatening to engulf IP-protected elite cultivars, spawning fears of biopiracy on one hand and IP infringement on the other. However, the “common heritage” notion was also problematic for farmers in many developing countries because it meant that while the genetic resources contained within their land races and wild relatives were open to appropriation, the patented and hybrid varieties of the developed countries were not.¹¹ This Article discusses the idea

¹⁰ See International Treaty on Plant Genetic Resources for Food and Agriculture art. 10, June 29, 2004, available at <ftp://ftp.fao.org/ag/cgrfa/it/ITPGR.pdf> [hereinafter ITPGR] (promulgated by U.N. Food and Agriculture Organization (“FAO”) in 2004 and entering into effect at end of June 2004). The ITPGR aims at governing the international exchange of plant genetic resources. In November 2001, delegates from 116 countries voted to adopt the ITPGR, which was to enter into force only when at least 40 nations either ratified or acceded to it. See Kelly Day-Rubenstein & Paul Heisey, *Plant Genetic Resources: New Rules for International Exchange*, AMBER WAVES, June 2003, at 22. The 40-nation threshold was surpassed when 12 European nations and the European Community ratified the treaty, triggering a 90-day countdown that culminated in the treaty going into effect on June 29, 2004. *Biodiversity Treaty Signed*, SW. FARM PRESS, Apr. 15, 2004, available at http://southwestfarmpress.com/mag/farming_biodiversity_treaty_signed/index.html.

For a detailed summary of the ITPGR ministerial that took place in June 2006 in Madrid, Spain, see Int’l Inst. for Sustainable Dev., *Summary of the First Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture*, EARTH NEGOTIATIONS BULL., June 19, 2006, available at <http://www.iisd.ca/vol09/enb09369e.html> (including discussion of funding strategy for “farmers’ rights” fund and relationship between ITPGR and MTA).

New ITPGR implementation initiatives and strategies are under way. One is the so-called “doomsday vault,” the global seed repository under construction on the permanently frozen Norwegian Island of Svalbard. Unlike other seed banks, which are working banks with uneven security and access levels, not to mention funding sources and commitments, Svalbard is meant to be off-limits and a bank of last resort, both legally and geographically speaking. Svalbard is above the Arctic Circle and is the northernmost point to receive commercial air service. The seed vault is scheduled to start accepting deposits by fall 2007, starting with smaller seed banks and agricultural and scientific organizations. The vault will have capacity for up to three million seed varieties, holding what Cary Fowler calls, “The biological foundation for all of agriculture.” See Rick Weiss, *The World’s Agricultural Legacy Gets a Safe Home: Vault on Arctic Isle Would Protect Seeds*, WASH. POST, June 19, 2006, at A1.

¹¹ See KLOPPENBURG, *supra* note 8, at 46. According to Kloppenburg:

Land races are genetically variable populations that exhibit different responses to pests, diseases, and fluctuations in environmental conditions. The genetic diversity of these land races was, and remains, a form of insurance for peasant cultivators. By planting polycultures comprising

of sovereign national property in this new regime of germplasm, which may be transformed all too easily into the intellectual property of individuals and corporations. To the extent that patented seeds supplant non-IP-protected seeds, is IP law in the process of fundamentally transforming global public necessities such as agricultural production and food supply? If so, then the distributive effects of such a broad transformation must be addressed. This Article suggests that a “one-size-fits-all” IP solution only serves to ratify the preexisting subordination and inegalitarian distributions of knowledge and power. Could there be a way out of this trend in which it is possible to “propertize” virtually everything?

Are We All “Crits” Now? Developing nations now have some of the legal tools needed to play the game with sovereign property rights. Will those nations be able to avoid the traps inherent in the idea of property that we have seen in the past? Have we come to a point where we are capable of escaping the over-determined, structuralist account of IP that undergirded the example of racial chattel slavery and the question of “who owns the blues?” Is that an over-optimistic forecast, given the structural subordination present in the world today? Does the selective shielding of some practices and things from “sovereign” property status vis-à-vis the public domain carry any problematic assumptions or consequences which might affect the answers to these questions?

genetically diverse varieties, peasant farmers made certain that, whatever the year might bring in the way of weather or pests, some of the seed sown would grow to maturity and provide a crop. The objective of these early breeders was not high yield but consistency of production. And the result of their efforts was the development of great inter- and intra-specific genetic variability in particular and relatively confined geographic regions.

Id.

I. RAISING THE QUESTION OF THE DISTRIBUTION OF THE BENEFITS
AND BURDENS OF INTELLECTUAL PROPERTY LAW

*The Distributive Question.*¹² In attempting to answer any of the aforementioned questions, the key issue involves how to effectively raise a further question of the distribution of the benefits and burdens of IP law. Chander and Madhavi Sunder in *The Romance of the Public Domain*¹³ and Chon in *Intellectual Property and the Development Divide*¹⁴ have intervened in the dominant IP discourse and posed that question. This Article first reviews some of these authors' arguments, then moves on to discuss the three above-mentioned examples in light of these authors' insights.

*Intellectual Property Winners and Losers.*¹⁵ In an important article,

¹² In non-IP terms, the Commission on Intellectual Property Rights noted in its 2002 Final Report that "nearly 1.2 billion people lived on less than \$1.00 a day, and nearly 2.8 billion people lived on less than \$2.00 per day. About 65% of them are in South and East Asia, and a further 25% in Sub-Saharan Africa." See COMMISSION ON INTELLECTUAL PROPERTY RIGHTS, U.K. SEC'Y OF STATE FOR INT'L DEV., INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY 8 (2002) [hereinafter CIPR REPORT], available at http://www.iprcommission.org/papers/pdfs/final_report/CIPRfullfinal.pdf; see also ANDREW CRUMP, THE A TO Z OF WORLD DEVELOPMENT 78 (Wayne Ellwood ed., 1998) (noting that developed "northern, industrialized nations, sometimes referred to as the 'first world' included the 35 market-oriented countries of the Organization for Economic Cooperation and Development (OECD) [with] per capita [annual] incomes of greater than \$10,000"); Doris Estelle Long, "Democratizing" Globalization: Practicing the Policies of Cultural Inclusion, 10 CARDOZO J. INT'L & COMP. L. 217, 235 (2002). On the concern of distributive inequalities and initial allocations, see, for example, Clarissa Long, *Proprietary Rights and Why Initial Allocations Matter*, 49 EMORY L.J. 823, 823 (2000) (noting that initial allocations of IP rights matter because those who start out holding those rights determine who ends up with them).

¹³ Anupam Chander & Madhavi Sunder, *The Romance of the Public Domain*, 92 CAL. L. REV. 1331 (2004).

¹⁴ Margaret Chon, *Intellectual Property and the Development Divide*, 27 CARDOZO L. REV. 2821 (2006).

¹⁵ See Abdulqawi A. Yusuf, *TRIPS: Background, Principles and General Provisions*, in INTELLECTUAL PROPERTY AND INTERNATIONAL TRADE 10-11 (Carlos M. Correa & Abdulqawi A. Yusuf eds., 1998) (discussing importance of need to recognize diverse needs, resources, and levels of development in negotiations over IP rights); CARLOS M. CORREA, INTELLECTUAL PROPERTY RIGHTS, THE WTO AND DEVELOPING COUNTRIES: THE TRIPS AGREEMENT AND POLICY OPTIONS 5-6 (2000) (noting distributive asymmetries between countries of global North and South in terms of expenditures on research and development to build technological capacity); CIPR REPORT, *supra* note 12; PETER DRAHOS WITH JOHN BRAITHWAITE, INFORMATION FEUDALISM: WHO OWNS THE KNOWLEDGE ECONOMY? 11 (2002) (noting how developed countries misled developing countries during TRIPS negotiations about benefits they would receive by accepting

Chon asserts that the distributional consequences of domestic IP norm-setting are seldom given the serious consideration they deserve.¹⁶ Likewise, the further internationalization of IP, fueled in part by the multilateral Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”), ignores Chon’s domestic distributional concerns but on the global stage.¹⁷ This indifference is

and implementing IP substantive minima); RICHARD PEET & ELAINE HARTWICK, *THEORIES OF DEVELOPMENT* 7 (1999) (noting “Americans spend more on cosmetics than it would cost to provide basic education to the two billion people in the world who lack schools”); BALAKRISHNAN RAJAGOPAL, *INTERNATIONAL LAW FROM BELOW: DEVELOPMENT, SOCIAL MOVEMENTS AND THIRD WORLD RESISTANCE* 34 (2003) (noting “[i]n the latter half of the twentieth century the physical violence of the western intervention was replaced by the economic violence of structural adjustment and the debt crisis, mediated by the [IMF] and the World Bank”); MICHAEL P. RYAN, *KNOWLEDGE DIPLOMACY: GLOBAL COMPETITION AND THE POLITICS OF INTELLECTUAL PROPERTY* 12-13 (1998) (noting how IP laws are increasingly being linked with unrelated trade areas, thereby drawing developing countries into adopting higher levels of IP protection than they otherwise would); SUSAN K. SELL, *PRIVATE POWER, PUBLIC LAW: THE GLOBALIZATION OF INTELLECTUAL PROPERTY* 174 (2003) (“[TRIPS] locks in a commitment to IP as a system to exclude and protect. The public-regarding side of the balance is vastly overshadowed by the private side of the ledger.”); AMARTYA SEN, *DEVELOPMENT AS FREEDOM* 174 (1999). See generally Rosemary J. Coombe, *Fear, Hope, and Longing for the Future of Authorship and a Revitalized Public Domain in the Global Regime of Intellectual Property*, 52 *DEPAUL L. REV.* 1171, 1173, 1177-78 (2003) (speculating on ways that current IP trends toward increasing scope and privatization of resources might be checked, or even reversed); Graeme Dinwoodie & Rochelle Cooper Dreyfuss, *TRIPS and the Dynamics of Intellectual Property Lawmaking*, 36 *CASE W. RES. J. INT’L L.* 95, 120 (2004) (criticizing overly formalistic interpretations of TRIPS by TRIPS dispute resolution panels as resulting in formal equality, but substantive inequality); Ruth L. Okediji, *Public Welfare and the Role of the WTO: Reconsidering the TRIPS Agreement*, 17 *EMORY INT’L L. REV.* 819 (2003) (noting absence of any overarching principle at work in emerging area of international IP law); Margaret Chon & Shuba Ghosh, *Joint Comment on WIPO Draft Report: Intellectual Property Needs and Expectations of Traditional Knowledge Holders* (Fall 2000), <http://www.wipo.int/tk/en/tk/ffm/ffm-report-comments/msg00008.html>.

¹⁶ Chon, *supra* note 14, at 2832 (arguing that utility-maximization rationale of emergent international IP protection regimes ignores distributional consequences).

¹⁷ Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments — Results of the Uruguay Round, 33 *I.L.M.* 81 (1994) [hereinafter TRIPS]. TRIPS was meant to clarify the results of the negotiations since the Round was launched in Punta del Este, Uruguay, in September 1986. See World Trade Organization, *A Summary of the Final Act of the Uruguay Round: Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods*, http://www.wto.org/english/docs_e/legal_e/ursum_e.htm#nAgreement (last visited Jan. 29, 2007). For a comprehensive analysis of the TRIPS agreement and its history, see generally DANIEL GERVAIS, *THE TRIPS AGREEMENT: DRAFTING HISTORY AND ANALYSIS* (2003). For more information on the TRIPS agreement, see also the Final

the direct result of TRIPS' incorporation of the same type of crude balancing test that is used domestically to determine the appropriate balance between exclusive, private rights of IP owners and the access of protected works by consumers and users, as opposed to citizens.¹⁸ It is perhaps unsurprising that this test appears skewed heavily in favor of the interests of IP producers, owing to its over-reliance on efficiency-based utilitarian justifications.¹⁹

A New Metric. Chon notes that an alternative approach to crude utilitarianism has begun to emerge in international development discourse.²⁰ She also meticulously critiques the unreflective use of a unitary economic growth indicator — gross domestic product (“GDP”) — and its presumptive ubiquity as the accurate measure of national social welfare.²¹ Several assumptions undergird this use of GDP as a metric. One assumption is the notion that the distribution of wealth within a particular nation or society is irrelevant or simply a tertiary background concern when implementing or adapting IP systems.²² While alien to the international IP context, Chon points

Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, 33 I.L.M. 1125 (1994); INTELLECTUAL PROPERTY RIGHTS IN THE WTO AND DEVELOPING COUNTRIES 11-47 (Jayashree Watal ed., 2001).

¹⁸ See Neil Weinstock Netanel, *Asserting Copyright's Democratic Principles in the Global Arena*, 51 VAND. L. REV. 217, 221 (1998) (proposing that vision of copyright should be to foster vision of democracy and not just markets); see also Niva Elkin-Koren, *Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace*, 14 CARDOZO ARTS & ENT. L.J. 215, 216-17 (1996).

¹⁹ See Chon, *supra* note 14, at 2832.

²⁰ *Id.*; see also William W. Fisher, *Reconstructing the Fair Use Doctrine*, 101 HARV. L. REV. 1661, 1698-1789 (1988). In the domestic context, Professor Fisher's work represents an early important intervention in IP discourse. Fisher methodically sketched out two different visions of interpreting and implementing the fair use doctrine in U.S. copyright law: an economic utilitarian balancing of costs and benefits of an expansive interpretation, and a utopian vision of the fair use doctrine as an engine for social transformation. While Fisher focused on the domestic arena, there are parallels between a utilitarian, economic vision of IP law and a socially transformative vision that one may see emerging in discussions of international IP protection.

²¹ Chon, *supra* note 14, at 2832. For example, Chon notes that over-reliance on GDP as a mode of measurement means that a country could have most of its people living in dire poverty while only a small percentage actually gains access to essential goods and services required for human functioning.

²² Kaldor-Hicks efficiency is related to use of GDP as a measure of social welfare. Kaldor-Hicks only measures social welfare if the total social “pie” is getting larger, but not when the winners (in terms of wealth) could compensate (or should compensate) the losers. For a concise definition of Kaldor-Hicks efficiency, see JULES COLEMAN, *MARKETS, MORALS AND THE LAW* 98 (1988). An illustration is provided below:

out that the Human Development Index (“HDI”) (composed of three variables, namely, life expectancy at birth, educational attainment, and standard of living as measured by real per capita income) has been employed by mainstream institutions as an alternative and more responsive measure of social welfare.²³

The “Public Domain” Is Too Big; the “Public Domain” Is Too Small. Implied in the HDI approach is concern not only for the undersupply but, more importantly, for the unequal access to potentially widely available and necessary global public goods.²⁴ This category of goods includes a whole range of information long considered part of the

One state of affairs (E') is Kaldor-Hicks efficient to another (E) if and only if those whose welfare increases in the move from E to E' could fully compensate those whose welfare diminishes with a net gain in welfare. Under Kaldor-Hicks, compensation to losers is not in fact paid.

Id. This definition of efficiency is illustrated in the following example. For Situation 1, assume a society consists of four individuals, A, B, C, and D, each of whom has 25 units of benefit (e.g., dollars, utils, etc.; the exact measure does not matter). In the aggregate, the society has 100 units. Now, for Situation 2, assume an alternative society in which individuals A, B, and C, have 5 units and D has 105 units. In the aggregate, the society in Situation 2 has 120 units, 20 more than the society in Situation 1, and a move from Situation 1 to Situation 2 is Kaldor-Hicks efficient, even though three-quarters of the members of the society are left worse off by it. After the move from Situation 1 to Situation 2, D could give each of A, B, and C 20 units, thereby restoring them to the amount they had in Situation 1 (25 units) while retaining 45 units ($105 - (3 \times 20)$). Nothing in the definition of Kaldor-Hicks efficiency, however, actually requires D to compensate A, B, and C. Thus, a move from equality to vast inequality can be Kaldor-Hicks efficient if the winners' gains exceed the losers' losses, even if the losers are moved below the poverty line while the winners simply add to vast amounts of preexisting wealth. See Martin J. McMahon, Jr. & Alice G. Abreu, *Winner-Take-All Markets: Easing the Case for Progressive Taxation*, 4 FLA. TAX REV. 1, 39 (1998).

²³ Chon, *supra* note 14, at 2832 (citing A.P. Thirwall, *Development as Economic Growth*, in THE COMPANION TO DEVELOPMENT STUDIES 41, 43-44 (Vandana Desai & Robert B. Potter eds., 2002)).

²⁴ *Id.* at 2833; see also DRAHOS WITH BRAITHWAITE, *supra* note 15, at 216 (noting “[a]nother and perhaps more fundamental objection to information feudalism is the threat it poses to the supply of knowledge as a public good at a time when people around the world are becoming more and more dependent on knowledge goods as public goods”); Keith E. Maskus & Jerome H. Reichman, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, in INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME 3, 7 (Keith E. Maskus & Jerome H. Reichman eds., 2005) [hereinafter Maskus & Reichman] (“As private interests take precedence over public concerns . . . the proliferation of exclusive rights could raise fundamental roadblocks for the national and global provisions of numerous other public goods, including scientific research, education, health care, biodiversity, and environmental protection.”).

intellectual public domain of developing nations — that is, works or materials that are not owned by *someone* but are instead openly available to everyone and are not subject to copyright protection.²⁵ Jack Kloppenberg has argued that such information has been characterized and legally constructed as being in the so-called public domain for too long with little, if any, recognition for its value.²⁶ In the domestic context, the problem appears to be reversed. The public domain is seen — with good reason — as besieged by IP maximalists.²⁷ As the scope of IP rights expands (via the broadening of protectible subject matter,²⁸ the lengthening of terms of protection,²⁹ and the strengthening of rights conferred³⁰), the public

²⁵ See discussion *infra* Part IV (dealing with controversies in early 1980s regarding FAO's International Undertaking on Plant Genetic Resources that categorized *both* utility patent protected and Patent Variety Protected crops as belonging to "common heritage of mankind"). The United States and European nations were staunchly opposed to such characterization of their IP protected elite cultivars as existing in a global seed germplasm public domain. See also discussion of the 2001 ITPGR, of which the United States is a signatory, that takes the position that plant genetic resources are sovereign national property (with the exception of around 65 crops and forages, which are given "common heritage" treatment in "the form received" from an internationally administered network of seed banks. ITPGR, *supra* note 10, art. 10.

²⁶ See Jack R. Kloppenburg, Jr. & Daniel L. Kleinman, *Seeds of Controversy: National Property Versus Common Heritage*, in SEEDS AND SOVEREIGNTY: THE USE AND CONTROL OF PLANT GENETIC RESOURCES 188 (Jack R. Kloppenburg, Jr., ed., 1988) (stating that developed countries of North justify open access of plant germplasm on theory that "raw" germplasm cannot be given a price because of the indeterminacy associated with the usefulness of any germplasm accession").

²⁷ Professor Pamela Samuelson coined the term "IP maximalist." According to Samuelson, "[C]opyright maximalists assert that there is no piece of a copyrighted work small enough that they are uninterested in charging for its use, and no use private enough that they aren't willing to track it down and charge for it." Pamela Samuelson, *The Copyright Grab*, WIRED, Jan. 1996, available at http://www.wired.com/wired/archive/4.01/white.paper_pr.html.

²⁸ See, e.g., Copyright Act, 17 U.S.C. § 120 (2006), amended by Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998); *Moseley v. V Secret Catalogue, Inc.*, 537 U.S. 418 (2003) (discussing Federal Antidilution Amendments Act that amended Lanham Act to include federal cause of action for trademark dilution); *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124 (2001) (holding that plant variety protection framework and general utility patent regime were not mutually exclusive); *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) (opening patenting of life-forms by focusing on human intervention as critical factor in determining patentability); *Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2d Cir. 2001) (interpreting Digital Millennium Copyright Act expansively and, thus, enjoining website owners from posting code that may be used to circumvent anti-copying controls in digital media).

²⁹ See Sonny Bono Copyright Term Extension Act of 1998, Pub. L. No. 105-298, 112 Stat. 2827 (current version at 17 U.S.C. §§ 301-304 (2006)) (extending copyright

domain seems to be in radical disrepair.³¹ These critiques have set in motion and energized a multiplicity of campaigns to reconstruct the public domain as a means of mitigating the distributional problems prevalent in the domestic arena.³² However, this reconstructed public domain may be much more indeterminate. There is the paradox that the public domain is shrinking too quickly domestically, and therefore needs to be de-propertized, but also seems to have been “too big,” and, therefore, needs to be “propertized” on the international level.

The Author Is Dead; Long Live the Author. Chander and Sunder have described ways that private IP and the public domain are reciprocally

protection an additional 20 years to author's life plus 70); *see also* *Eldred v. Ashcroft*, 537 U.S. 186, 199-200 (2003) (upholding constitutionality of term extension).

³⁰ *See, e.g.*, *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 125 S. Ct. 2764 (2005) (dealing with peer-to-peer networks); *A & M Records, Inc. v. Napster, Inc.*, 284 F.3d 1091 (9th Cir. 2002) (same); *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) (dealing with business method patents). Literally dozens of law review articles have been published criticizing the concept of business method patents. *See, e.g.*, Rochelle Cooper Dreyfuss, *Are Business Method Patents Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 263, 274-77 (2000), Jared Earl Grusd, *Internet Business Methods: What Role Does and Should Patent Law Play?*, 4 VA. J.L. & TECH. 9, 9-10 (1999); Robert A. Kreiss, *Patent Protection for Computer Programs and Mathematical Algorithms: The Constitutional Limitations on Patentable Subject Matter*, 29 N.M. L. REV. 31, 34 (1999); Malla Pollack, *The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Consideration, and Constitutional History*, 28 RUTGERS COMPUTER & TECH. L.J. 61, 62 (2002); Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business*, 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 61, 67-68 (1999).

³¹ *See generally* JAMES BOYLE, *SHAMANS, SOFTWARE AND SPLEENS: LAW AND CONSTRUCTION OF THE INFORMATION SOCIETY* (1996) (sketching out elements for theory of law and information, drawing on varied examples from law of blackmail to IP rights in plants and human body parts); LAWRENCE LESSIG, *FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY* (2004) (critiquing cultural costs imposed by expanding IP laws and cartelization of media and exploring decentralized alternatives); SIVA VAIDHYANATHAN, *COPYRIGHTS AND COPYWRONGS: THE RISE OF INTELLECTUAL PROPERTY AND HOW IT THREATENS CREATIVITY* (2001) (attacking expanding scope of copyright and term length).

³² Among these campaigns, *see, for example*, Center for the Study of the Public Domain at Duke Law School, <http://www.law.duke.edu/cspd/> (last visited Jan. 29, 2007) (promoting research and scholarship in contributions of public domain); Creative Commons, <http://www.creativecommons.org> (last visited Jan. 29, 2007) (offering flexible copyright licenses for use of creative works); Digital Future Coalition, <http://www.dfc.org> (last visited Jan. 29, 2007) (balancing IP laws in digital medium); Downhill Battle, HomePage, <http://www.downhillbattle.org> (last visited Jan. 29, 2007) (non-profit organization with goal of building fairer music industry through support of participatory culture).

constructed.³³ A survey of scholarship examining the legal construction of the public domain, both within and outside the United States, reveals a subset dedicated to not only examining the construction of “authorship,” but also how such constructions relate to IP law.³⁴ To appreciate the evolving construction of the public domain, it is necessary to understand how authors and other creators claim ownership in intellectual works. This question is the focus, in part, of recent critiques of the rise of the “romantic author” — a seemingly mystical, numinous figure. This strand of scholarship — call it the “critique of romantic authorship” and its proponents “author-crits” — seeks to debunk myths associated with a singular focus on this individuated figure of de novo intellectual production. The romantic author is the individuated figure for whose benefit, reward, and encouragement the conferral and expansion of IP rights has been justified.³⁵ Among their contributions, the author-crits have elucidated the diversity of forms and processes involved in creating IP works, which commonly involve collective, serial, or even anonymous innovative and creative activities.³⁶ Moreover, public domain scholars, but not necessarily author-crit scholars, such as Professors Lawrence Lessig,³⁷ Jessica Litman,³⁸ David Lange,³⁹ Molly Shaffer Van

³³ See Chander & Sunder, *supra* note 13, at 1339.

³⁴ See, e.g., Peter Jaszi, *On the Author Effect: Contemporary Copyright and Collective Creativity*, in *THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE 15* (Martha Woodmansee & Peter Jaszi eds., 1994) (discussing how trope of “romantic author” pervades U.S. copyright law, justifying expanding scope of protection, despite U.S. copyright law’s general utilitarian cast); Peter Jaszi & Martha Woodmansee, *Beyond Authorship: Refiguring Rights in Traditional Culture and Bioknowledge*, in *SCIENTIFIC AUTHORSHIP: CREDIT AND INTELLECTUAL PROPERTY IN SCIENCE* (Mario Biagioli & Peter Galison eds., 2001) (analyzing emphasis on originary innovation in area of U.S. patent law and ways that traditional knowledge and IP rights in plant genetic resources challenge that paradigm).

³⁵ See Chander & Sunder, *supra* note 13, at 1339; see also BOYLE, *supra* note 31, at 116 (stating that because of sympathy they elicit from decision makers, authors tend to be favored in struggle for ownership). *But see* Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 *TEX. L. REV.* 873, 886 (1997) (observing that “[i]t is certainly possible to find evidence of the rhetoric of authorship in copyright cases, but as an explanation for the nuances of copyright, trademark, or right-of-publicity cases, the concept falls well short of the mark”) (citation omitted).

³⁶ Chander & Sunder, *supra* note 13, at 1339.

³⁷ See generally LAWRENCE LESSIG, *THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD* (2002) (analyzing “tragedy of the commons” model as applied to IP and exploring alternative models in context of digital networks).

³⁸ See generally JESSICA LITMAN, *DIGITAL COPYRIGHT* (2001) (critiquing application and expansion of copyright into digital realm, as represented in part by Digital Millennium Copyright Act of 1998, and problematic judicial interpretations of

Houweling,⁴⁰ and others have shown in a variety of ways the appropriation of preexisting knowledge and works may, more often than not, serve as the foundation or components for more creative intellectual products.

Open Access to Resources Does Not Equate to Equal Ability to Utilize Those Resources. In *The Romance of the Public Domain*, Chander and Sunder note that the contemporary “public domain movement” loosely formed partly under the goals of demystifying and critiquing the romantic author trope in terms of copyright.⁴¹ The author-crits sought to articulate the necessity of developing a well-thought-out balance between IP rights and a vibrant public domain. They also sounded a dystopian cautionary note about the dire consequences of disturbing such a balance. However, as Sunder, Chander, and Chon all trenchantly warn in their friendly critique of author-crits, advocating for the expansion of the intellectual public domain in and of itself does little to meliorate stark, inegalitarian distributions of IP rights among individuals, groups, and nations.⁴² The fact that resources are accessible in the public domain in no way presumes distributional equality in the ability to access those materials.⁴³ Chander and Sunder propose mechanisms such as inalienability rules, contract rules, property rules, and affirmative support programs that could aid in ensuring a more equitable distribution of opportunities and the consequent rewards. They also acknowledge, however, that their proposals are fraught with potentially insurmountable political and practical obstacles, ranging from potential difficulties in

copyright in cyberspace, as well as upward ratcheting international copyright treaties exerting pressure on domestic copyright regimes around world); Jessica Litman, *The Public Domain*, 39 EMORY L.J. 965 (1990) (beginning to map contours of border between IP and public domain by noting their interdependence and need for balance).

³⁹ See generally David Lange, *At Play in the Fields of the Word: Copyright and the Construction of Authorship in the Post-Literate Millenium*, 55 LAW & CONTEMP. PROBS. 139 (1992) (speculating on creativity set free by new technology and shape of IP laws to come); David Lange, *Recognizing the Public Domain*, 44 LAW & CONTEMP. PROBS. 147 (1981) (noting for first time necessity of protecting public domain, and describing how vibrant public domain is necessary for creation of works of IP).

⁴⁰ See generally Molly Shaffer Van Houweling, *Distributive Values in Copyright*, 83 TEX. L. REV. 1535 (2005) (noting that second generation creators can probably find what they need in public domain).

⁴¹ See Chander & Sunder, *supra* note 13, at 1339.

⁴² See *id.* at 1340 (“Public domain advocates seem to accept that because a resource is open to all by force of law, that resource will be exploited by all. In practice, however, differing circumstances — including knowledge, wealth, power, and ability — render some better able than others to exploit a commons.”).

⁴³ See *id.*

implementation to possible impediments to innovation.⁴⁴

The Relationship Between Strength of IP Laws and the Production of IP Is Not Linear. Chander, Sunder, and Chon also note how the relationship between private (intellectual) property and the public domain is predominantly viewed through an economic lens — a somewhat overdetermined scenario that makes different levels of innovation seem threatened by inappropriately set levels of IP protection.⁴⁵ This strand of scholarship — call it “innovation economics” — attempts to show that stronger IP laws, rather than spurring an increased production of intellectual works in a linear fashion, may have discernible inefficient and anticompetitive effects that undercut the very motives⁴⁶ that underlie some of IP’s major justifications.⁴⁷ For example, scholars such as Professor Jerome Reichman attack the basic assumption that stronger IP rights, in scope, term, and subject matter, necessarily lead to an increase in the production of more creative or innovative works.⁴⁸

Remedying Inegalitarian Distributions of the Benefits and Burdens of IP Laws. Perhaps the most important contribution that Chander and Sunder offer is that the choice between a critical discourse that

⁴⁴ See *id.* at 1355.

⁴⁵ See *id.* at 1331 (noting at outset that since Garrett Hardin, law and economic scholars have been on crusade to highlight evils of commons); Chon, *supra* note 14, at 2832 (stating that there is over-reliance on utility-maximization justifications for IP norms).

⁴⁶ See, e.g., Yochai Benkler, *The Battle over the Institutional Ecosystem in the Digital Environment*, COMM. ACM, Feb. 2001, at 84, 87 (noting that overly extensive copyright laws are not only inefficient but are opposed to very purpose of copyright).

⁴⁷ See Fisher, *supra* note 20, at 1688. U.S. IP laws are premised on four justifications. The first and predominant justification is instrumental and derives from Jeremy Bentham’s utilitarianism, seeking to set the baseline rules to maximize utility for the greatest number of people — what level of IP in the aggregate will induce the optimal production of intellectual works. The second is subsidiary but nonetheless influential, deriving from John Locke’s labor-desert theory — “I made it, it’s mine.” On this view, IP rights are a just desert for the labor and creativity expended. The third justification is more furtive but derives from Hegelian “personality” theory — we produce the creative product because we respect the personhood of the creator. This may be seen in European *droit de suite* moral rights laws. Finally, the fourth is the most elusive — that is the protection of “custom” as articulated by Scottish Enlightenment philosophers. We protect IP because it has been the “custom” of the relevant community to do so. Examples of this strand are extremely rare, although one could say the ambiguity regarding works made for hire and joint works is evidence of the desire to look to “custom.”

⁴⁸ See generally Maskus & Reichman, *supra* note 24 (making arguments for lower levels of IP protection in different industrial sectors in name of increasing efficiency of those laws).

analyzes the public domain from either an author-crit or an innovation economics analysis is incomplete at best.⁴⁹ After reading Chander, Sunder, and Chon, missing pieces of the IP puzzle begin to emerge. In particular, what becomes apparent are the frequently ignored matters of inegalitarian distribution of benefits arising from IP rights between persons within a nation, between various nations, and between different regions and areas of the globe. Yet once these inegalitarian distributions are articulated, the question that remains is how a remedy should be structured for such troublingly asymmetrical distributions.

Private Property and Free Contract Are Indeterminate. As a starting point, the work of scholars such as Professors Michael Heller, Carol Rose, Duncan Kennedy, and Frank Michelman raise interesting points as to different types of property regimes and their consequent distributive effects. In his work on the anti-commons, Heller provides tools to analyze the dangers of haphazard propertization of what were once commonly held resources.⁵⁰ Heller draws upon the work of Kennedy and Michelman on the economic justifications for the legal institutions of private property. In particular, Heller examines the distributional effects of analytic assumptions endemic to the traditional defenses of private property and free contract regimes.⁵¹ Kennedy and Michelman argue that a so-called “efficient” regime contains not only rules aptly characterized as “private property” and “free contract” but *must* also include a combination of rules drawn from notions typically deemed as inimical to private property. Some examples of these types of property include unowned commons and resources governed by collective controls.⁵² As a result, Kennedy and

⁴⁹ See Chander & Sunder, *supra* note 13, at 1343 (opining generally that “[t]he binary rhetoric of intellectual property versus the public domain masks the ways in which the commons often functions more in the interests of traditional property owners than in the interests of commoners”).

⁵⁰ See Michael A. Heller, *The Tragedy of the Anti-Commons*, 111 HARV. L. REV 621, 622-24 (1998) (contrasting Garrett Hardin’s famous evocation of “tragedy of the commons,” which arises when too many people have privilege to use resource and none has right to exclude, leading to overuse, with “tragedy of the anti-commons,” which arises when too many people hold rights of exclusion leading to underuse of resource); see also Michael A. Heller & Rebecca Eisenberg, *Can Patents Deter Innovation?: The AntiCommons in Biomedical Research*, SCIENCE, May 1, 1998, at 698.

⁵¹ See Heller, *supra* note 50, at 675 n.244 (noting that “Kennedy and Michelman disprove the presumptive efficiency of private property as an abstract proposition,” and then offering example that draws from these two scholars to implicate distributional consequences).

⁵² See, e.g., ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990) (exploring whether and how common

Michelman write, “[T]here is no more reason for awarding the palm of ‘presumptive efficiency’ to private property/free contract than to its opposites.”⁵³ In criticizing an interpretation of legal rules based on supposedly neutral economic principles, Kennedy and Michelman observe that efficiency arguments depend in a tautological manner on initial entitlements. These entitlements, affected by gender, race, ethnicity, and class, raise questions of resource distribution and equality of opportunity and access.

The Vicious Circle of Market Rhetoric. Elsewhere, Michelman argues that the productivity of any particular group should not be viewed as static and divorced from the actions of decision-makers who determine investments in human capital.⁵⁴ For example, low investment by decision-making elites for the benefit of disadvantaged groups may appear perfectly rational in an economic sense. However, such distributional decisions establish a vicious circle in which preexisting handicaps (stemming from inegalitarian access to resources) legitimize the reluctance of investing in, and consequent empowerment of, historically disadvantaged persons, groups, or even nations.⁵⁵ From the perspective of an “impartial” market, such results reinforce the perceived inferiority of those adversely affected individuals, groups, or nations. After all, the argument goes, if the market is impartial, then relative success in the market will mostly be a function of individual capacity or lack thereof.⁵⁶ Moreover, in the IP

pool resources can be organized in such a way as to limit both excessive consumption and administrative costs); Duncan Kennedy & Frank Michelman, *Are Property and Contract Efficient?*, 8 HOFSTRA L. REV. 711, 714 (1980) (arguing that, ex ante, there is no way of knowing whether “private property” is more efficient than managing resources via some type of “commons” arrangement, and suggesting that what we refer to as “private property” is complex intermingling of “public” subsidy and “private” markets). See generally Charlotte Hess & Elinor Ostrom, *Ideas, Artifacts and Facilities: Information as a Common Pool Resource*, 66 LAW & CONTEMP. PROBS. 111 (2003) (discussing how certain types of information may be optimally managed as “common pool resources” rather than as private property); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711 (1986) (observing that commons need not be managed by government, but may be managed through customs).

⁵³ Kennedy & Michelman, *supra* note 52, at 714.

⁵⁴ See Frank Michelman, *Super Liberal Romance, Community, and Tradition in William J. Brennan, Jr.’s Constitutional Thought*, 77 VA. L. REV. 1261, 1297-98 (1991) (quoting Professor Cass R. Sunstein).

⁵⁵ The literature on urban redevelopment is rife with the metaphor of the “vicious circle.” See, e.g., Duncan Kennedy, *The Effect of the Warranty of Habitability on Low Income Housing: “Milking” and Class Violence*, 15 FLA. ST. U. L. REV. 485, 513 (1987).

⁵⁶ See Michelman, *supra* note 54, at 1298 (“[In b]elieving both that Blacks are inferior and that the economy impartially rewards the superior over the inferior,

context, assuming the market is functioning efficiently both in theory and in practice, it is plausible to argue that both copyright and patent law regimes possess distributive values that work to mitigate, rather than instigate or amplify, preexisting social and economic disadvantage.⁵⁷ Yet what are we to make of IP regimes, whether domestic or global, in which race, ethnicity, gender, and other such factors shape whether particular individuals, groups, and nations encounter preexisting structural disadvantages? How to effectively mitigate or eliminate those disparities is still an open question.

Markers of Structural Subordination. Kennedy has focused his distributional effects critiques on the dynamics of class, race, and patriarchy on the grounds that these categories hold several things in common.⁵⁸ First, classes and races, and, to a lesser extent, genders and sexes, live separately, despite the fact that divisions of labor reinforce their interrelation and interdependence. Second, markets and other external forces mediate and shape perceived differences in ability or capacity that are linked to class, race, sex, and other ascriptions. Third, ascriptive social group members possess shared identities, communication patterns, and mutual knowledge that distinguish them from other groups. These group members simultaneously participate in regional or national cultures, and are so identified in relation to “foreigners.” Finally, Kennedy has posited that these ascriptive differences are more than just superficial differences, but rather are markers that refer to hierarchical arrangements of groups in which men tend to dominate women, whites tend to dominate other racial groups, upper classes dominate lower classes, and so on. When looking at distributive concerns regarding IP regimes, Kennedy’s argument is also amenable to extension for discussing the relations between different nations and

whites see that most Blacks are indeed worse off than whites are, which reinforces their sense [both] that the market is operating [impartially] . . . [and] that Blacks are indeed inferior. After all, equal opportunity is the rule, and the market is an impartial judge; if Blacks are on the bottom, it must reflect their relative inferiority.” (quoting Kimberlé Crenshaw’s statement on “ordinary prejudice”).

⁵⁷ These distributive values are grounded in copyright’s primary and ideal purpose of enlarging the creative pie and thus making copyright, in effect, a subsidy for poorly financed creators. Thus, exceptions for certain uses, such as educational uses and fair use, serve to create opportunities and dissemination that benefit poorer creators. Without these exceptions those opportunities and benefits would otherwise not occur. See Van Houweling, *supra* note 40, at 1540. For a discussion on the distributive values of early American patent law, see sources *infra* note 63 and accompanying text.

⁵⁸ See Duncan Kennedy, *Distributive and Paternalist Motives in Contract and Tort Law, with Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 MD. L. REV. 563, 566-68 (1982).

regions.

A Substantive Equality Principle. Kennedy, Michelman, and others provide an exceedingly useful and diverse bundle of analytic tools. Chon's idea of introducing and developing a substantive equality principle provides the strand needed to tie together this bundle. Chon writes that "[a] new first principle of intellectual property fairly demands to be articulated," in order to "transform the relatively crude binary intellectual property balancing test into a more nuanced and context-sensitive discourse about the instrumental purpose of intellectual property."⁵⁹ This Article puts to use this bundle-and-strand idea in discussing and analyzing the three idiosyncratic examples proposed in the Introduction, in hopes of building upon these authors' insights.

II. DISTRIBUTIVE MOTIVES IN U.S. PATENT LAW

A. Race, Agency, and Coercion in Early U.S. Patent Law

Race, Property, and Theft. "Property involves theft by the Rich from the Poor," W.E.B. Du Bois wrote in his Marxist-tinged, Depression-era masterwork *Black Reconstruction*.⁶⁰ In particular, those Americans in the African Diaspora, with whom Du Bois identified as "black folk," had been and remained subject to theft of their bodies, offspring, labor, labor's produce, cultural artifacts, and expressive traditions. Dominant culture and institutional denials of their inventive agency often facilitated this theft. Du Bois's earlier works, *The Souls of Black Folk*⁶¹ and *The Gift of Black Folk*,⁶² reminded readers that despite their treatment as "real estate," "black folk" had made distinctive, though usually unrecognized and devalued, cultural, social, and inventive contributions from which America and the entire world had benefited. White America, on individual and collective levels, had often appropriated these contributions without just compensation, or had stolen them outright. It was in the harsh and brutal context of race,

⁵⁹ Chon, *supra* note 14, at 2831.

⁶⁰ W.E.B. DU BOIS, *BLACK RECONSTRUCTION: AN ESSAY TOWARD A HISTORY OF THE PART WHICH BLACK FOLK PLAYED IN THE ATTEMPT TO RECONSTRUCT DEMOCRACY IN AMERICA 1860-1880*, at 618 (1935).

⁶¹ W.E.B. DU BOIS, *THE SOULS OF BLACK FOLK* (1903) (offering groundbreaking meanings of race, culture, and black identity experiences in American history).

⁶² W.E.B. DU BOIS, *THE GIFT OF BLACK FOLK: THE NEGROES IN THE MAKING OF AMERICA* (1924) (discussing pluralistic cultural history of United States, focusing on distinctive contributions of African Americans).

technology, and IP law that Eli Whitney and a slave named Sam were involved in the invention and patenting of the cotton gin.

Early U.S. Patent Law Distinct from European Patent Law. Critical of their European counterparts,⁶³ the designers of the U.S. patent system sought to make the American system more “progressive,” by comparison.⁶⁴ For instance, U.S. law reserved the right to a patent for the “first and true inventor” anywhere in the world, as opposed to reserving this right to either his or her employer or to the first person to import the invention into the respective country.⁶⁵ Furthermore, U.S. laws required the immediate publication of patent specifications, and the requisite fees for obtaining patents were far lower than the fees charged throughout Europe.⁶⁶ For example, the initial fees in the

⁶³ See B. Zorina Khan & Kenneth L. Sokoloff, *Institutions and Democratic Invention in 19th-Century America: Evidence from “Great Inventors,” 1790-1930*, 94 AM. ECON. REV. 395, 395 (2004). Anglo American patent law derives its origins from a system of economic policies established in the fourteenth century when royal letters of protection issued by British monarchs were first recorded. These early monopolies were granted as a means of enticing skilled foreigners in select trades to immigrate to the British Isles. Three centuries later, however, the clamor for the progenitor of antitrust legislation led King James I to revoke all such domestic monopolies; he would later begin to grant the monopolies afresh. Two decades into the new arrangement, it proved to be unwieldy, prompting James I, with the assistance of Parliament, to abolish monopolies altogether in Great Britain, with the enactment of the Statute of Monopolies of 1623. Article VI of this statute, however, contained an important exception, which allowed for a maximum of 14 years of monopoly privileges for “the sole Working of Making of any Manner of new Manufacturers within the Realm, to the true and first inventor and Inventors of such Manufacture, which at the time of Making such Letters Patents and Grants shall not use.” This exception would later serve as the model for the American patent law system. Michael D. Davis, *The Patenting of Products of Nature*, 21 RUTGERS COMPUTER & TECH. L.J. 293, 298 (1995).

⁶⁴ “Progressive” in this context refers to the new U.S. patent system’s orientation. This new orientation enables segments of society, which had been shut out of the patent system as it existed in Europe, to avail themselves of such privileges. See generally Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (Pt. 1)*, 76 J. PAT & TRADEMARK OFF. SOC’Y 697 (1994) (discussing European connection in evolution of early American patent regime); Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (Pt. 2)*, 76 J. PAT & TRADEMARK OFF. SOC’Y 849 (1994) (discussing early English patent custom); Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (Pt. 3)*, 77 J. PAT & TRADEMARK OFF. SOC’Y 771 (1995) (discussing transition to common law of patents); Edward C. Walterscheid, *The Early Evolution of the United States Patent Law: Antecedents (Pt. 3 Cont’d)*, 77 J. PAT & TRADEMARK OFF. SOC’Y 847 (1995) (continuing discussion of transition to common law of patents).

⁶⁵ See Khan & Sokoloff, *supra* note 63, at 395.

⁶⁶ See *id.* Arguably, members of society with modest means were theoretically able to find out specifications of patented inventions without incurring as much a cost as

United States were less than five percent of the fees set in Great Britain at the time.⁶⁷ One salutary effect of these changes was to extend patent rights to poorer people who, by employment relationships or other economic constraints, may not have been able to afford to obtain patents under the European systems.

Expanded Opportunities to Patent Inventions. Another important American innovation was the permanent establishment in 1836 of a formal examination system, replacing the system in which patents were registered without rigorous examination.⁶⁸ In the prior system, wealthier private parties could expend their own resources on litigation to have a court declare their patents valid when questions of priority or novelty surfaced. Under the revised 1836 system, examiners made the same determinations at a fraction of the cost. In addition to meliorating inequities as to who was able to secure a patent, the new federal examination system introduced economies of scale to absorb and distribute the costs associated with legitimizing patent grants.⁶⁹ Theoretically, this system increased opportunities across the social strata by reducing uncertainty as to the validity of the granted patents, thus, in theory, making it easier for cash-strapped or resource-poor inventors to either mobilize capital for the purposes of exploiting their inventions or to license or sell their rights to third parties better able to commercialize new inventions.

Slaves and Inventions. Admittedly, the American patent system encouraged a more diverse composition of inventors through broadened access to opportunities for investing in, exploiting, and deriving income from inventive activity.⁷⁰ However, because of the historical realities of race and slavery, the extent of this beneficial distributive impact on black inventors was illusory at best. During the

there would have had there been no prompt publishing requirement.

⁶⁷ See *id.*

⁶⁸ In the registration system, a patent was routinely granted as long as the stipulated requirements were met without inquiry into questions of novelty and priority. In other words, as patents issued, there was no presumption of validity as now exists in the examination system. Questions of novelty and priority were left for the courts to decide through the process of litigation when patent owners sued for infringement. It was therefore not uncommon for multiple patents to be issued for the same invention to multiple patentees as long as the respective patentees all satisfied the procedural requirements. Thus, in the registration system, those with the financial resources to engage in expensive litigation in the form of infringement suits were more likely to secure favorable judgments and, in the process, obtain judicial backing as to the validity of their patents.

⁶⁹ See Khan & Sokoloff, *supra* note 63, at 395.

⁷⁰ See *id.* at 396.

antebellum era, whether a free or enslaved black person was eligible to apply for a patent depended on the “blessing” or “tutelage” of a white person. This created a legal relationship that resembled a strange version of the copyright law “work made for hire.”⁷¹ Thus, at least in the South, “[o]ften what the Negro actually developed was exploited by the white man by whom he was employed or through whom he endeavored to find recognition.”⁷² Despite the chattel slavery system, black inventors nonetheless made significant inventive contributions to the antebellum southern wealth reified in its plantation and tillage oligarchy. Technological advancements by black inventors would also help transform the post-Reconstruction South into an industrial democracy, despite chattel slavery’s existence in the southern states for more than half of the nineteenth century, as well as later developments such as the Black Codes, sharecropping systems, and Jim Crow laws.⁷³

Structural Inequality. The early American patent system beckoned many poor white inventors to achieve wealth and recognition through a quasi-egalitarian patent system that facilitated investment in their lucrative ideas.⁷⁴ The same opportunities did not await black inventors,⁷⁵ whose contributions white society tended to ignore when the commercial value of a black invention was uncertain. In cases where commercial promise was more readily apparent, black inventions were subject to appropriation without attribution.⁷⁶ State laws governing property and contract expressly precluded slaves from applying for or holding property. Presumably, this proscription included slaves being precluded from owning patents.⁷⁷ Moreover,

⁷¹ See *id.*

⁷² Dorothy C. Yancy, *Four Black Inventors with Patents*, 39 NEGRO HIST. BULL. 574, 574 (1976).

⁷³ See *id.* at 574-76.

⁷⁴ When examining inventors born between 1739 and 1819, a picture emerges that depicts most white inventors (over 60%) as having come from unassuming backgrounds judged by their level of education, having attained only primary education. See Khan & Sokoloff, *supra* note 63, at 397.

⁷⁵ Thomas Jennings was the first black inventor to receive a patent on March 3, 1821 (U.S. Patent No. 3,306) for a dry-cleaning process called “dry scouring.” About.com, *Inventors: Thomas Jennings*, <http://inventors.about.com/library/inventors/bljennings.htm> (last visited Nov. 28, 2006). He used his royalties to buy his family out of slavery and support abolition of slavery. *Id.*

⁷⁶ See, e.g., Yancy, *supra* note 72, at 574-76 (noting that slaveowners such as Oscar Stewart, who were denied patents to their slaves’ inventions, still went ahead and exploited those same inventions by marketing and selling them and keeping all proceeds for themselves).

⁷⁷ For example, in seventeenth century Louisiana, the Louisiana Code Noir

while free blacks had the legal ability to patent their inventions (the *Dred Scott v. Sanford* decision notwithstanding),⁷⁸ the economic and educational conditions that many free blacks faced in the northern states simply were not conducive to pursuing whatever incentives and opportunities U.S. patent law provided.⁷⁹

(Intellectual) Property of the Slaveowner. The exclusion of slaves from owning patents flowed from the status of slaves as chattel, as property, and as assets to be owned.⁸⁰ While a slave was legally a subcategory of property, contradictory provisions in state and federal law treated slaves nominally as persons or as fractional persons for such purposes as criminal punishment and census counting, thus creating extremely complex legal and personal relationships between slaves and their masters.⁸¹ However, because neither federal nor state law considered slaves citizens, they were not entitled to enjoy the privileges and immunities of citizenship, which at the time included an entitlement to protection of the fruits of one's intellectual labors.⁸² Because slaves were themselves the legal property of others, a slave could not own property (real, personal, or intellectual) in his or her own name or enter into contracts to safeguard associated rights.⁸³

Coerced Inventiveness. Economically speaking, racial slavery in the United States was a paradoxical institution. On the one hand, slavery clearly produced skewed distributions of wealth and resources, and some of the antebellum period's wealthiest individuals resided in the South.⁸⁴ On the other hand, coercive efforts to harness unpaid labor productivity were not efficient means to generate wealth.⁸⁵ Indeed, given the regional wealth discrepancy between the antebellum North

disqualified slaves from being witnesses or parties in civil litigation, from owning property, or from contracting in their own names. Hans W. Baade, *The Gens Couleur of Louisiana: Comparative Slave Law in Microcosm*, 18 *CARDOZO L. REV.* 535, 541 (1996).

⁷⁸ *But see generally* *Dred Scott v. Sanford*, 60 U.S. (19 How.) 393 (1856) (declaring Missouri Compromise as unconstitutional and broadly holding slaves were property).

⁷⁹ *See, e.g.,* Yancy, *supra* note 72, at 575 (outlining some problems and difficulties facing black inventors in early part of nineteenth century).

⁸⁰ *See* Anthony R. Chase, *Race, Culture, and Contract Law: From the Cottonfield to the Courtroom*, 28 *CONN. L. REV.* 1, 16 (1995).

⁸¹ *See* A. Yasmine Rassam, *International Law and Contemporary Forms of Slavery: An Economic and Social Rights-Based Approach*, 23 *PENN ST. INT'L L. REV.* 809, 814-15 (2005).

⁸² *See* Chase, *supra* note 80, at 21-22.

⁸³ *See id.* at 22.

⁸⁴ *See id.* at 54.

⁸⁵ *See* IRA BERLIN, *GENERATIONS OF CAPTIVITY: A HISTORY OF AFRICAN AMERICAN SLAVES* 3, 10 (2003).

and South, the “peculiar institution” of slavery may well have been economically *inefficient*. Furthermore, it is one thing to coerce an enslaved person’s physical labor; it is another altogether to force involuntary creativity, intellect, and industry.⁸⁶ Realizing this quandary, some slaveowners developed bizarre incentive systems whereby slaves could earn “time off” for themselves — not out of benevolence, but rather because such incentives translated into higher profits for the slaveowner.⁸⁷ In exchange for achieving certain levels of labor productivity, slaves with exceptional intellect, talent, or skills in certain crafts might be allowed time to pursue their areas of creative and inventive genius.

Oscar Stuart v. Ned. Meanwhile, some contemporaneous slavery apologists believed that slaves simply lacked the requisite inventive agency to generate or possess patentable ideas. For example, Oscar J.E. Stuart, whose slave Ned is credited with developing an innovative double plow, argued that slaveowners were entitled to the fruits of their slaves’ intellectual labor, just as they were entitled to the fruits of their slaves’ physical labor. Stuart contended that “the Patent laws were passed to encourage inventions of a useful character on the Part of the Political to the exclusion of the [servile] race, who by reason of the general Stupidity, are concerned without the range of both the letter, [and] the Spirit of the law.”⁸⁸

Heads I Win, Tails You Lose. Ironically, slavery supporters used widespread knowledge that the double plow originated from a slave to increase negative perceptions of free blacks. In an 1859 correspondence, former Mississippi Governor Albert G. Brown described the attribution of the double plow to a slave as “giving the lie to the abolition cry that slavery dwarfs the mind of the negro.”⁸⁹ Brown further questioned whether a free black person had ever been credited with inventing anything useful.⁹⁰ From Brown’s perspective, which can fairly be deemed a damned-if-you-do, damned-if-you-don’t attitude, free blacks who had theoretical access to education and opportunities for inventive activity, but who failed to fabricate patented inventions at the same rate as whites, thereby displayed their group’s supposed inventive inferiority. The fact that free blacks were denied the recognition they were due for their contributions played a

⁸⁶ See *id.* at 78-79.

⁸⁷ See *id.*

⁸⁸ Dorothy C. Yancy, *The Stuart Double Plow and Double Scrapper: The Invention of a Slave*, 69 J. NEGRO HIST. 1, 49 (1984).

⁸⁹ *Id.* at 51.

⁹⁰ *Id.*

role in white society's conferral of even less respect for their inventive capacity than for that of slaves.⁹¹

Patent Incentives and Racial Hierarchy. The facts of slaves' deprivation of patent protection and the structural realities that rendered free blacks' patents to be of relatively little value add texture to historical accounts which either minimize or ignore significant contributions of black innovators and their unpatented or infrequently patented innovations.⁹² While the early U.S. patent laws ideally provided neutral incentives that fostered innovation, the formal and substantively unequal treatment that both slave and free black innovators faced, including inadequate or nonexistent compensation, recognition, or attribution, raises questions as to the neutrality of these incentives and their distributive effects. Consequently, although the U.S. patent system purportedly encouraged and fostered opportunities for innovation across diverse social strata, it actually denied most black persons the ability to reap the rewards from their ingenuity, thus compounding racially oppressive legal, economic, and social structures.

Illusory Agency. Viewing the master-slave relationship as a traditional principal-agent relationship⁹³ is misleading because, as one writer put it, "[a]lthough at first glance it appears that, as agent of a master, a slave gained power and recognition as a human being, such an impression was only an illusion."⁹⁴ As one might expect, the relationship between a slaveowner and slave was a strikingly

⁹¹ See Roy L. Brooks, *American Democracy and Higher Education for Black Americans: The Lingering Effects Theory*, 7 J.L. & SOC. CHALLENGES 1, 29 (2005) ("In some respects free blacks, for whom higher education was at least a theoretical possibility, were accorded less respect than slaves. The 1840 census is a case in point. Free blacks were much more often than slaves classified among the insane and idiots in 19th century census surveys. Thus, the government's census takers regarded the slaves as having better mental health than free blacks.") (citation omitted).

⁹² Some of the inventions attributed to black inventors, in addition to the Stuart double scraper and double plow referred to earlier, include a corn harvester invented by Henry Blair, described as a "colored man," in 1834 and for which he secured a patent two years later. James Forten is reported to have invented a device for handling sails, and Norbert Rilleux was granted a patent in 1846 for his development of a vacuum pan. See Yancy, *supra* note 72, at 574.

⁹³ The principal-agent problem, as understood through the lens of economics, refers to the difficulties of motivating one party to act beneficially on behalf of another. The principal may use various incentives, such as compensation, supervision, and punishment mechanisms (e.g., "the carrot and the stick") to try to align the agent's interests and activities with those that the principal desires.

⁹⁴ Chase, *supra* note 80, at 29.

unidirectional power relationship.⁹⁵ Legally speaking, slaveowners controlled slaves because slaves were not conceived of as possessing self-agency.⁹⁶ Of course, we now recognize that the reverse was in fact the case — slaves did not possess self-agency in the legal sense because they were under the legal control of slaveowners. Because slaveowners used slaves as agents to extend their own ability to effectively conduct business, the slave “was in the unenviable position of being unable to contract on his own behalf and of being held responsible by his master of inappropriate and disadvantageous representation of the master’s interests.”⁹⁷

B. *Eli Whitney and the Cotton Gin*

Self-Mythologizing the “Great Inventor.” It is against this backdrop that some historians advance the theory that Whitney claimed credit for the invention of the cotton gin when the operative idea may have come from a slave,⁹⁸ or even from a cotton cleaning tool used in India for many centuries.⁹⁹ Some historians have also depicted Whitney’s story as a case study in the enduring hagiography of “hero-inventor” biographical myths that surround the nineteenth century.¹⁰⁰ Angela

⁹⁵ See *id.* (“All benefits of the agency-principle relationship fell to the master and none to the slave.”) (citation omitted).

⁹⁶ See *id.*

⁹⁷ *Id.*

⁹⁸ See, e.g., PORTIA JAMES, *THE REAL MCCOY: AFRICAN AMERICAN INVENTION AND INNOVATION 1619-1930* (1989) (discussing African American contributions to technological culture of America).

⁹⁹ See Answers.com, *Cotton Gin*, <http://www.answers.com/topic/cotton-gin> (last visited Nov. 28, 2006) (suggesting that Whitney may also have adapted cotton gin idea from *charkha*, ancient tool that had long been used in India to separate cotton fibers and seeds).

¹⁰⁰ See Carolyn Cooper, *Myth, Rumor, and History: The Yankee Whittling Boy as Hero and Villain*, 44 *TECH. & CULTURE* 82, 85 (2003), available at <http://pascalfroissart.online.fr/3-cache/2003-cooper.pdf>. Folklore scholar and author Cooper noted that folklore and ancient texts identify certain stories as legends and myths — stories that recognize a solitary god or hero as the personification or originator of a particular human advancement. Ascription to a single hero of the gradual, complex human achievement not only simplified the story but also added color and drama. Inevitably, the process of retelling these stories endowed the mythical hero with new attributes and accomplishments usually linked together by a string of detailed anecdotes, which supplied ready answers as to the advent of rather complex developments. Along the same lines, Cooper identified some reasons that explain the enduring legacy of biographical myths of the nineteenth century heroic inventor. One reason is that such writings begin outside the gradually adopted canons of written history and in their earliest form supply no telltale footnotes by which to check authenticity. Another reason is that many technological advances involved

Lakwete, for example, asserts that Whitney and his associate Phineas Miller self-consciously initiated the story surrounding the origins of the cotton gin they successfully patented.¹⁰¹ During an infringement action initiated by Miller to validate his supposed rights, the cotton gin invention story he meticulously constructed before his death in 1803 was adopted, affirmed, and later reinforced by a trial court.¹⁰²

Sam the Slave and Extension of the Economic Viability of Slavery. There are at least two ironies noted in revisionist accounts on the origin of the cotton gin. First, the actual invention is a case of culturally developed knowledge and intergenerational technology transfer to benefit a poor, racialized labor collective, but subsequently appropriated and exploited by a white entrepreneur. Historian Portia James contends that the person who provided Whitney with the key idea for his new gin was a slave identified only by the name of Sam.¹⁰³

protracted and ambiguous social, economic, and political interactions that make it difficult for scholars and the wider public to summarize the origin of a human development absent the use of mythical stories.

¹⁰¹ See LAKWETE, *supra* note 7, at 55. Lakwete alleges that Whitney and Miller consciously and collaboratively “obscured the origins of the gin and laid the foundation for the myth that developed about it.” *Id.* In correspondence between the two, a picture emerges of a dispirited Whitney on the verge of giving up and returning home. *Id.* Less than three weeks later, Whitney reversed his fortunes. *Id.* Miller wrote to Thomas Jefferson, then Secretary of State and de facto commissioner-administrator of the Patent Office, and introduced Whitney as the inventor of “a machine for ginning cotton.” *Id.* Miller claimed Whitney achieved the feat “without the benefit of tools or workmen” and as such “deserve[d] the encouragement of the public.” *Id.* Shortly thereafter, Miller reminded Whitney that he was in a competitive race against two unknown and several known inventors. *Id.* In addition, several slave mechanics were well-versed in the art, owing to their expertise in the manufacture of foot gins utilized in most plantations. However, based on his skill level and his relative newcomer status in the cotton industry, deliberative invention on Whitney’s part played little or no role in his supposed invention of the gin. *Id.* Instead, Lakwete alleges that Whitney and Miller “[seemed] to have engaged in duplicity masked by prestige.” *Id.* Setbacks in constructing a working prototype of the new gin only served to deepen the mystery of its origins. *Id.* at 56. While the invention Whitney claimed was for the wire-toothed gin, by this time different kinds of gins — most notably, the roller gin — had already been in widespread use. *Id.* Miller deepened the mystery of the gin’s origins by suggesting that there were “mechanics who have hitherto been ignorant of the [the Whitney] patent, and who have constructed machines, the use of which is thereby exclusively secured to the patentees.” *Id.* at 60. The implication of this statement is that some mechanics employed wire teeth — as opposed to rollers — in their gins before Whitney’s successful patent application effectively removed the principle from the public domain.

¹⁰² See *id.* at 70.

¹⁰³ *Engines of Our Ingenuity: Black Inventors* (University of Houston radio broadcast), available at <http://www.uh.edu/engines/epi127.htm> (last visited Nov. 28, 2006); see also JAMES, *supra* note 98, at 54-55.

Sam reportedly received the idea from his father, who had developed a comb-like device to solve the problem of removing seeds from picked cotton.¹⁰⁴ On this account, Whitney's contribution is only to have mechanized and patented the comb.¹⁰⁵ Second, although Sam's invention intended to ease the harshness of plantation slave labor conditions, namely, the difficulty of extracting seeds from short-staple cotton,¹⁰⁶ Whitney's cotton gin checked certain economic inefficiencies of the plantation slave economy and delayed slavery's inevitable decline for at least two decades. The American slave population had steadily declined in the decade preceding the invention of the mechanized gin. However, the cotton gin made the labor-intensive enterprise of running a cotton plantation economically viable and even profitable.¹⁰⁷ Following the gin's widespread adoption and use, the number of slaves began increasing once again and the United States moved into a new expansionist era that included the Mexican-American War and the annexation of Texas.¹⁰⁸

IP's Role in Amplifying Racial Subordination. In the foregoing example, the question of where the distribution of IP's benefits and burdens fall is simple and straightforward. To benefit from a patent, one must be legally capable of self-agency and self-proprietorship. If one is not, the burdens arising from a patented technology may indeed fall heavily — as heavily as the renewed feasibility of the plantation system and the expansion of chattel slavery. Indeed, the IP system worked in harmony with this economic system to amplify the structural subordination of both free blacks and black slaves in general, thereby deepening and widening distributional inequalities and inequalities of access to the American entrepreneurial system.

III. DISTRIBUTIVE ASPECTS OF U.S. COPYRIGHT LAW

A. *History of the World, Part One?*

Questioning the Crude Logic of Copyright Incentives. An important, explicit purpose of U.S. copyright law is to encourage the creation of

¹⁰⁴ See *Engines of Our Ingenuity*, *supra* note 103.

¹⁰⁵ See *id.*

¹⁰⁶ See Answers.com, Cotton Gin, <http://www.answers.com/topic/cotton-gin> (last visited Nov. 28, 2006) (noting that short-staple cotton was only growable cotton variety throughout most of American South).

¹⁰⁷ See *id.*

¹⁰⁸ *Id.*

expressive works that benefit the general public.¹⁰⁹ Recently, Van Houweling noted that while “[t]he crude logic of copyright is that creativity is good for society, that creativity needs encouragement, and that copyrights provides this encouragement by securing ‘a fair return’ for creators,” copyright has a distinct distributive impact in its quest to “increase the size of the creative pie.”¹¹⁰ Van Houweling identifies three distributive aspects of U.S. copyright law. First, the rights granted serve as indirect subsidies for some would-be creators by facilitating the financing of their works.¹¹¹ Second, the limits incorporated into the American copyright framework, for example, the fair use doctrine, serve the needs of cash-strapped or resource-poor inventors by permitting them to build upon existing protected works without paying for access.¹¹² Third, until recently, copyright has been enforced only infrequently against those infringers who were less likely to pay for their uses of protected works.¹¹³

¹⁰⁹ The constitutional provision that authorizes both copyright and patent law pronounces its goal as “promot[ing] 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.” U.S. CONST. art. I, § 8, cl. 8. The Supreme Court has sought to elaborate on the goals of the copyright system by finding that, while the immediate aim of copyright law is to secure a fair return for creators’ labor, its ultimate aim is to stimulate artistic creativity for the greater good. Van Houweling, *supra* note 40, at 1539.

¹¹⁰ Van Houweling, *supra* note 40, at 1539.

¹¹¹ *Id.* at 1540-41. Copyright creates a mechanism through which even financially poor creators can muster the financing needed to create and disseminate their works. This is achieved mainly by the resource-poor creator promising to assign some of his or her rights in the commercially viable creative work to an individual or entity in a position to fund the endeavor. For example, a cash-strapped independent filmmaker may assign some of his rights to publicly display, reproduce, and distribute copies of the finished work to investors who may, in turn, recoup their investment by selling tickets or DVDs.

¹¹² The fair use doctrine as adopted by American courts can be traced to early English cases under the Statute of Anne, which granted copyright holders exclusive rights to the printing and reprinting of books. *See infra* note 142. Early judicial opinions interpreted these rights as not extending to “translations, abridgements, or other variations on the copyrighted original that included independent creative contributions.” Van Houweling, *supra* note 40, at 1543. This narrow reading gave subsequent authors the green light to build on existing works without risk of incurring liability. Justice Story adopted the fair use doctrine in *Folsom v. Marsh*, 9 F. Cas. 342 (C.C.D. Mass. 1841) (No. 4,901). The American fair use doctrine “developed in ways that arguably address distributive concerns” by permitting the avoidance of liability when the use serves an important social purpose and is not particularly lucrative, for example, in the contexts of teaching, scholarship, research and other noncommercial uses. Van Houweling, *supra* note 40, at 1543-45.

¹¹³ Until relatively recently, the only people with reason to worry about the

Understanding Music as Property. Today it is commonplace, if not universally accepted, to treat music as a subspecies of IP and to recognize both musical production and music distribution as IP practices regulated by copyright law. These laws and practices simultaneously attempt to facilitate and regulate musical innovation, usage, distribution, and reproduction. However, the idea that music is susceptible to such improprieties as misappropriation and unauthorized reproduction presupposes the twin understandings that music actually is (private) property and, more fundamentally, that music can be treated as property.¹¹⁴

Music and Property: Contested and Dynamic Categories. Copyright law is a relatively new and highly powerful influence in the world of musical expression. In two recent significant articles, Professor Michael W. Carroll investigates when, why, and how copyright law came to apply to music.¹¹⁵ Carroll reminds contemporary audiences that the “property-rights model for financing music production and distribution is a relatively recent development in response to specific social, political, and economic circumstances.”¹¹⁶ Although many preconditions of the commodification of musical expression and its regulation under copyright law have existed for millennia, countless musical modes throughout history were created without any notions of commodification or copyright protection.¹¹⁷ Moreover, the

prospect of a copyright infringement suit were commercial entities with the capacity to churn out and distribute a great number of protected works. Poorly financed amateurs and copyists in it for themselves were likely to operate under the radar of the rights holders who sought to fry the big fish first. Recent developments, particularly the music recording industry’s aggressive pursuit of alleged infringers, serve to show that the tide is turning against the small-scale infringer as new technologies permit high quality, minimal effort replication of works, especially in the digital realm. See Van Houweling, *supra* note 40, at 1545-46.

¹¹⁴ See Michael W. Carroll, *Whose Music Is It Anyway?: How We Came to View Musical Expression as a Form of Property*, 72 U. CIN. L. REV. 1405, 1418 (2004) (providing three functional criteria for when music is treated as property: “(1) those associated with the production or distribution claim a proprietary relationship with the music (i.e., as something that is ‘theirs’ insofar as it ‘belongs’ to them); (2) those who make proprietary claims also claim a right to receive attribution in connection with the music or to prohibit or control the reproduction, distribution, or performance of ‘their’ music by others; and (3) these claims of control are recognized and vindicated by law”).

¹¹⁵ See *id.*; Michael W. Carroll, *The Struggle for Music Copyright*, 57 FLA. L. REV. 907, 910 (2005).

¹¹⁶ Carroll, *supra* note 114, at 1496.

¹¹⁷ *Id.* at 1491-92 (“[T]he preconditions for objectifying and commodifying music were present in the ancient world, and were again developed well before the Renaissance. So far as we can tell, however, the notion of property in music had no

categories of music and property are, and have always been, dynamic and contested.¹¹⁸ Bringing together the categories of music and property produces further dynamism and contestation, Carroll observes, “particularly when [property is] used to describe legally-protected exclusive rights in intangible expression.”¹¹⁹

Eurocentric, but Helpful? Carroll explores an admittedly Eurocentric history of musical expression, divided into four periods that this Article also briefly traces: (1) the ancient world, (2) the medieval period, (3) the Renaissance, and (4) the Age of Enlightenment in England.

The Ancient World — Greece and Rome. Proprietary notions of musical composition, performance, and publication did not exist in the ancient world, at least not in any contemporarily comparable sense.¹²⁰ Music was viewed as “a gift from the gods,”¹²¹ “which reflected the greater mathematical order of the cosmos,”¹²² and as “a force of nature not susceptible to individual claims of ownership.”¹²³ Although a musical language existed, musical notation and literacy were highly concentrated in only certain hands, and musical performers consisted of certain social classes, such as laborers paid through wages or patronage, as well as unpaid slaves.¹²⁴ Furthermore, the “capacity to objectify musical expression was limited by extensive reliance on a background oral tradition.” Therefore, neither “distinct musical works that can be the subject of proprietary rights nor . . . the concept of a musical composer who might have the capacity to assert such rights” existed.¹²⁵

place in the conceptual cosmologies of the ancient world or in the Middle Ages. . . . The presence of the material conditions for commodification did not determine that commodification would follow. Similarly, the flexibility in the concept of private property, which was well understood in the ancient world and in the Middle Ages and extended even to intangible property, did not foreordain that music would be swept within the conceptual domain.” (citations omitted).

¹¹⁸ See *id.* at 1417.

¹¹⁹ *Id.*

¹²⁰ See *id.* at 1419 (“[T]he preconditions for objectifying musical expression in written texts [— such as papyrus and musical notation system —] were present but were not used for that purpose. Instead music remained part of an oral tradition and was not commodified.”); *id.* at 1431 (noting that even under Roman law and its notions of contract and intangible property, music was not considered property).

¹²¹ *Id.* at 1433.

¹²² *Id.*

¹²³ *Id.* at 1421.

¹²⁴ *Id.* at 1425-26.

¹²⁵ *Id.* at 1489.

The Middle Ages. During the Middle Ages, three major developments contributed to the eventual commodification of music: “(1) the (re)development of musical notation; (2) the emergence of musical composition as a distinct activity; and (3) the legal vindication of the city guilds’ claims for exclusive musical performance rights.”¹²⁶ However, because the Greek musical notation system had been lost in the fall of the Roman Empire, “[t]he tools for commodification — particularly musical notation — had to be reinvented.”¹²⁷

Music Transforms and Is Transformed. Music contributed to nascent, humanistic shifts. Troubadours¹²⁸ and jongleurs¹²⁹ brought “songs of love” and wide musical repertoires, respectively, to medieval cities, which had become hubs of learning, trade, and culture. Musicians’ guilds emerged with monopoly power to regulate who performed within city walls¹³⁰ and to protect local musicians against competition.¹³¹ These guilds provided “the first legally cognizable exclusive rights in musical labor, which amounted to a form of rights in the music itself.”¹³² However, music remained a primarily oral tradition without a fully formed notion of the “the composer,” let alone of property rights in composition. “Musical texts likely to be the objects to which property rights apply were not in circulation until the latter portion of the period,” Carroll notes, “and the social role of ‘the

¹²⁶ *Id.*

¹²⁷ *Id.* at 1419. Carroll argues that the new notation system was more elaborate and, as utilized by the church, prescriptive, through innovations like staff notation and instruction manuals. These innovations initially facilitated the church’s efforts to control musical composition, arrangement, and performance. However, dissemination of staff notation and instruction manuals increased musical literacy, as well as secular music practices and polyphonic composition, and thereby contributing (if glacially) to decentralization of knowledge and desecularization of authority. *See id.* at 1439-42.

¹²⁸ *Id.* at 1443-45 & nn.174-76 (describing troubadours’ influence in increasing secularization of musical performance, “emergence of self-aware composers/songwriters,” and gradual advent of proprietary claims over musical composition and attribution). Carroll depicts troubadours as aristocrats, accompanied by minstrels, who brought “the chanson, the dance-song, and the long narrative poem” that “expressed the feelings of courtly love or else told lengthy tales of brave deeds done.” *Id.* at 1445.

¹²⁹ *Id.* at 1444 n.166 (citing HENRY RAYNOR, *A SOCIAL HISTORY OF MUSIC: FROM THE MIDDLE AGES TO BEETHOVEN* 46 (1972) (describing jongleurs as traveling entertainers who covered broad and familiar musical repertoire)).

¹³⁰ *See id.* at 1444.

¹³¹ *See* HENRY RAYNOR, *supra* note 129, at 56; Carroll, *supra* note 114, at 1447 & n.184 (citing JACQUES ATTALI, *NOISE: THE POLITICAL ECONOMY OF MUSIC* 15-16 (Brian Massumi trans., Wlad Godzich & Jochen Schulte-Sass eds., 1985)).

¹³² Carroll, *supra* note 114, at 1434.

composer' as a potential claimant of property rights had only just begun to emerge."¹³³

The Renaissance. Many formative aspects of the commodification of music were present by the fifteenth century or had begun to emerge during this era.¹³⁴ The balance of power over musical expression swung away from performers and toward publishers, who began making proprietary claims on the music texts they brought to the market. Some such claims were protected by exclusivity rights granted under royal privilege,¹³⁵ and, in England, the Company of Stationers.¹³⁶ Romantic notions of authorship did not pertain to Renaissance composers. Yet, the role of the composer continued to evolve as secularization, patronage, and travel produced more musicians who made their livings as composers¹³⁷ and "began to make claims that their names be associated with the text and the music reflected in the text."¹³⁸ However, composers held lesser rights than did publishers,¹³⁹ received their compensation for publication directly

¹³³ *Id.* at 1419.

¹³⁴ *Id.* at 1449-50.

¹³⁵ Royal privilege carried certain copyright-like attributes. A privilege holder enjoyed a limited duration monopoly, revocable by sovereign will, which included the exclusive right to publish particular works or series of works, free from unauthorized competition. A privilege holder could also transfer that right and enforce it against infringement or against a Stationer's right in case of conflicting claims. Receipt of royal privilege was especially advantageous to its holder, as the printing press made exclusive publishing rights economically attractive as another potential source of income besides copying fees, patronage, or the sale of commissioned works. Carroll notes that "composers became self-aware subjects who potentially could be vested with property-like entitlements to their music." *Id.* at 1419. However, the system had several disadvantageous limitations, especially for composers. The rights over compositions were limited to publishing and selling musical scores, and rights against infringement were of limited practical benefit. Successful infringement actions brought only injunctive relief, and enforcement efforts against unauthorized publication or conflicting or overlapping privileges took place mostly outside the courts. The scope of privilege did not extend beyond the sovereign's borders. Furthermore, this system advanced sovereign censorship, where the right to publish was conditioned upon licensing and receipt of a privilege. *Id.* at 1458-61.

¹³⁶ *Id.* at 1461. The Stationers, the guild of London-based book publishers, exercised near-monopoly power on printing via what Carroll describes as "a perpetual right in copies administered through a registration scheme and accompanied by its own enforcement mechanisms." *Id.* at 1462.

¹³⁷ *Id.* at 1477-78.

¹³⁸ *Id.* at 1477.

¹³⁹ Only music publishers held exclusive rights in printed reproduction; composers held rights in the original manuscript and had no rights against infringement. Also, the authorial line between "publisher" and "composer" was murky, as publishers often produced compilations. *Id.* at 1480-81.

from the publisher in the form of printed copies, and commonly paid copying fees to publishers.¹⁴⁰

The Age of Enlightenment and Copyright in English Law. Major changes in music, publishing, and property law took place throughout Europe during the Age of Enlightenment.¹⁴¹ The period between 1710 and 1777 in England, in particular, was pivotal in the story of how copyright extended to the musical realm and to composers' interests in their own work. Music copyright resulted from a series of disputes advanced in English courts of equity. Professional music composers desired greater control over the publication of their music; publishers resisted extending copyright to music. At the center of these disputes

¹⁴⁰ *Id.* at 1483 (“Professional musicians generally had three likely employers: a royal patron, a town guild, or the road (i.e., the market for itinerant musicians).”).

¹⁴¹ Urbanization, the printing press, increased musical literacy, and the creation of middle class consumers for secular music composition and performance (e.g., musical theatre, opera, and in-home) helped to popularize music in London and other European cities. Music sales comprised a distinct publishing niche, and music publication fell largely outside the Stationers' control and registration ambit. The Crown had allowed the Printing Patent Act of 1662 to lapse in 1694, thereby weakening the Stationers' monopoly, leaving the rights of book publishers largely unprotected, and altering censorship. See Carroll, *supra* note 115, at 931 & n.136 (citing David Hunter, *Music Copyright in Britain to 1800*, 67 MUSIC & LETTERS 269, 271 (1986)).

Composers' employment conditions and compensation arrangements varied greatly. Some relied exclusively or almost exclusively on patronage; others made livings as freelancers. A few (primarily continental) composers of renown such as Handel and Haydn were able to focus all or most of their efforts on composition. *Id.* at 928. This had a direct effect on the ownership status of musical compositions. “Where composition was part of a musician's duties under his employment agreement, ownership in the manuscript generally vested in the employer; however, if performance was a musician's only musical duty, he would be free to seek publication and retain any payment made for the manuscript.” *Id.* at 927.

Initially, few composers saw commercial significance in controlling publication of their works. Rather, publication was a way to increase fame and audience for public performances and private enjoyment, as well as music literacy. Some composers asserted copyright or sought royal privilege as ways to improve their economic and social stature, or to increase control over how their work would come into the public sphere. Few pursued litigation to establish copyright, due to prohibitive litigation costs. Many music publishers ignored the Statute of Anne altogether. See *infra* note 142. Thus, they did not register with the Stationers. See Carroll, *supra* note 115, at 929-34. Exclusivity rights offered publishers little protection against infringement, due to difficulties of enforcement and the limited impact of equitable remedies. *Id.* at 935. “The booksellers knew that their position in the market was such that authors would, as a practical matter, be forced to sell their manuscripts to the Stationers' company if they wanted to get their work published at all.” Kevin J. Greene, *Copyright, Culture and Black Music: A Legacy of Unequal Protection*, 21 HASTINGS COMM. & ENT. L.J. 339, 346 n.27 (1999).

were issues of what rights and protections each party held, if any, under the common law, royal privilege, and the Statute of Anne of 1710.¹⁴² It was not until the mid 1770s, after nearly seventy years of legal uncertainty but only a handful of equity actions,¹⁴³ that musical composition and composers' rights finally received some firm protection under copyright.¹⁴⁴

Notated Music as a Sui Generis Category? Ultimately, under English law musical compositions occupied their own status; they were not necessarily "books" (that is, literary works) nor engravings (which the Engravers' Copyright Act of 1735 covered).¹⁴⁵ In *Bach v. Longman*, Lord Mansfield held that compositions fell within the Statute of Anne's category of "books and other writings."¹⁴⁶ However, complications remained, such as whether sheet music (either a collection or single

¹⁴² 8 Ann. 19 (1710) (Eng.). The Statute of Anne, which protected the rights of publishers and authors, "applied to 'books,' and granted authors and their assigns the 'sole liberty of [p]rinting and [r]eprinting' any book written by, or purchased from, the author." Carroll, *supra* note 115, at 923. The statute created a copyright term of up to 28 years for newly published works (no more than 14 years for the publisher, reverting to the author for another 14 years). In order to secure copyright, one had to meet title registration and deposit of copies requirements. Strict liability applied for unauthorized printing or reprinting, whereas liability for distributors turned on the distributor's knowledge that the book infringed copyright. However, royal privilege could provide more expansive protection than the Statute of Anne, and at least 16 royal privileges were granted to composers. See Carroll, *supra* note 115, at 930 & nn.132-33.

¹⁴³ See generally Carroll, *supra* note 115, at 935-45 (citing Ronald J. Rabin & Steven Zohn, *Arne, Handel, Walsh, and Music as Intellectual Property: Two Eighteenth-Century Lawsuits*, 120 J. ROYAL MUSIC ASS'N 112 (1995)).

¹⁴⁴ See *id.* at 912 n.25, 925 n.94, 945 n.239, 955-56 (citing *Bach v. Longman*, (1777) 98 Eng. Rep. 1274 (K.B.); *Donaldson v. Becket*, (1774) 98 Eng. Rep. 257 (K.B.)). *Donaldson* established two important precedents: that the common law did not confer upon publishers an exclusive copyright in perpetuity, and that republication of a work no longer protected under the Statute of Anne did not infringe upon any common law rights. In *Bach*, which involved Johann Christian Bach (one of Johann Sebastian's sons), English law recognized musical composition as subject to copyright protection under the Statute of Anne. Of this development, Carroll writes, "By bringing published music within the sphere of copyright, the decision regularized the means for obtaining and enforcing rights, and it established that these rights uniformly would be limited to the statutory period rather than subject to the ad hoc duration of printing privileges." *Id.* at 946.

¹⁴⁵ Engraver's Copyright Act, 1735, 8 Geo. 2, c. 13 (1735); see Carroll, *supra* note 115, at 934 & n.158; David Hunter, *Copyright Protection for Engravings and Maps in Eighteenth-Century Britain*, 9 LIBR. 128, 128-29 (1987); David Hunter, *Music Copyright in Britain to 1800*, 67 MUSIC & LETTERS 269, 278 (1986).

¹⁴⁶ *Bach v. Longman*, (1777) 98 Eng. Rep. 1274, 1274 (K.B.) (emphasis added); see Carroll, *supra* note 115, at 953-54 (analyzing basis for Mansfield's statutory construction) (citations omitted).

sheets) counted as a “book”; whether all composers were “authors” within the meaning of the Statute; how far authors’ rights and publishers’ rights extended;¹⁴⁷ and whether the Statute had implicitly created a “public domain” via time-limited copyright protection.¹⁴⁸ More fundamentally, the issues of whether composers could freely borrow “melodies, harmonies, and other compositional components from each other” remained unresolved.¹⁴⁹ The resonances of this struggle and the questions left to posterity by the early English copyright system inform contemporary American music copyright law. Indeed, the framers of the American copyright system eschewed the continental European notion of “moral rights” and instead modeled the American system after English copyright law.¹⁵⁰ This set of choices informs the legal and social dynamics within the question, “Who owns the blues?,” as explored below.

B. *Race, Music, Technology, and U.S. Copyright Law: Who Owns the Blues?*

The “Rip-Off” of Black Musicians by the White Music Industry. Historically, many black musical artists have been effectively denied the full protections of IP law. White artists have freely appropriated their work, while mainstream culture has treated them as mere uncompensated “sources.” Although this dynamic and its consequences are indeed tragic, the foregoing discussion of music and copyright may indicate that the relationships between black musicians, white musicians, publishers, and recording companies are more complex and textured than a one-size-fits-all narrative of “rip-off” and unilateral theft would suggest.

Black Creative Culture and Copy-“White”? Facially neutral doctrines may create varied, disparate consequences for persons of differing social backgrounds. Like its patent law counterpart, the American

¹⁴⁷ After *Donaldson* and *Bach*, publishers adapted to changed circumstances because they began to see and use copyright protection under the Statute of Anne and registration with the Stationers as a way to protect their economic and legal interests in music composition. Carroll, *supra* 115, at 946.

¹⁴⁸ *Id.* at 954-56 (citations omitted).

¹⁴⁹ *Id.* at 955.

¹⁵⁰ The notion of moral rights encompasses the right (1) to be known as author (paternity), (2) to prevent others from being named as author (attribution), (3) to prevent others from using a work or author’s name in such a way as to reflect adversely on the author’s professional standing, and (4) the economic rights of authors. These were the main justifications for copyright protection in continental Europe. See Greene, *supra* note 141, at 345-48.

copyright system does not exist in a vacuum. Rather, as Professor Kevin J. Greene points out, it exists within a concrete social milieu.¹⁵¹ Race remains an issue in U.S. law generally, and in aspects of U.S. copyright law specifically. Greene suggests that assumptions about copyright as a supposed body of “race-neutral” statutory and case law are problematic because “not all creators of intellectual property are similarly situated.”¹⁵² While the copyright system does possess some notable distributive and redistributive aspects, Greene argues that black creators, and black musicians in particular, may find themselves at distinct disadvantages regarding the ability to realize fully the opportunities that U.S. copyright law presents.¹⁵³

Formal Equality but Substantive Inequality. Greene notes that real distributive disadvantages may arise due to “(1) inequalities of bargaining power, (2) [a] clash between the structural elements of the copyright law and the oral predicate of Black culture, and (3) broad and pervasive social discrimination which both devalued Black contributions to the arts and created greater vulnerability of exploitation and appropriation of creative works.”¹⁵⁴ Taken together, these disadvantages have served to preclude black artists and creators from being able to fully take advantage of their creations while at the same time making it easier for others — whether white, black, or otherwise — to appropriate the same works for varied purposes.

Is There Something More at Work? While Greene’s examples are compelling and his arguments are well developed, the lessons drawn from Carroll’s work indicate that the story of race, culture, and copyright may involve more than *just* entrenched structural disadvantages. This story may require more nuance than straightforward reformism in order to achieve race-neutral distributive effects. In other words, the question is whether the solution to the exploitation Greene describes is the creation of more IP rights. Asking the question, “Who stole the blues?” begs a more fundamental and complex question: “Who *owns* the blues?”

¹⁵¹ See *id.* at 358-59.

¹⁵² *Id.* at 343.

¹⁵³ *Id.* Some redistributive aspects include terminations of transfers and pre-1976 Copyright Act renewals, and readjustment of the publisher’s right to republish collections. See *N.Y. Times Co. v. Tasini*, 533 U.S. 483, 487-88 (2001). It also includes works made for hire. See *Cnty. for Creative Non-Violence v. Reid*, 490 U.S. 730, 739 (1994). It even encompasses the heightened originality requirement for copyright in derivative works.

¹⁵⁴ Greene, *supra* note 141, at 356-57.

Borrowing, Homage and Appropriation — Whose Music Is It? Given the previous discussion, it may come as no surprise that many of the great works of music in Western history are more than referential; their authors borrowed heavily or lifted entire sections from other authors' previous and contemporary works. For example, Bach transcribed several of Vivaldi's concertos in their entirety and incorporated them into his own harpsichord and solo organ concertos.¹⁵⁵ Mozart took the Finale of the Jupiter Symphony from Hayden's Thirteenth Symphony in D Major,¹⁵⁶ Mahler borrowed from Brahms's First Symphony,¹⁵⁷ which in turn Brahms had borrowed from Beethoven's Ninth Symphony.¹⁵⁸ Handel also borrowed openly and notoriously from multiple sources.¹⁵⁹

There are many ways to examine this apparent acceptance of appropriation and borrowing, or infringement. One way is to understand it as a form of homage, or honoring the music of an influential composer. Another way to look at appropriation, as developed above, is to consider the relevant material and intellectual conditions of that time, place, and set of players.¹⁶⁰ For example, the

¹⁵⁵ See, e.g., Baroque Music Club, Vivaldi-Bach: Bach's Transcriptions for Solo Harpsichord, BMC 36, available at <http://www.baroquecds.com/36Web.html> (last visited Nov. 28, 2006).

¹⁵⁶ See KEMBREW MCCLEOD, OWNING CULTURE: OWNERSHIP AND INTELLECTUAL PROPERTY LAW 23 (2001).

¹⁵⁷ See *id.*

¹⁵⁸ See *id.*

¹⁵⁹ See *id.*

¹⁶⁰ As one writer notes:

Due to the way composers create classical works, copyright law has a special impact on this music. Classical composers have always borrowed from other works. For example, in his Saint Matthew Passion, Bach composed five variations of a single chorale. When taken in the context of the whole work, these sixteen bars become a kind of theme, as Bach uses the choristers as a sort of Greek Chorus. However, this was far from an original theme. The melody of the chorale was taken, note for note, from a lied, or song, by Hans Leo Hassler (1564-1612). It was so popular in Baroque-era Germany to use a familiar melody in a new work that there was a specific term, "contrafacta," for this type of melodic borrowing. Charles Ives' General William Booth Enters into Heaven, written on the death of the founder of the Salvation Army, incorporates melodies from hymns used in the early days of that organization. Much of the nationalistic style associated with Romantic composers such as Chopin could not have been achieved without borrowing from the music of those nations. Mozart borrowed liberally when composing his opera Don Giovanni. Such borrowing, however, did not make these works any less creative. The works simply incorporate motives with which the audience is already familiar. This helps to evoke a certain

period from the seventeenth century through the early nineteenth century was a transitional economic period in Europe moving toward early modern capitalism, industrialism, and nationalism. Patronage was still a widespread form of supporting arts and artists during this time. As such, Bach, Mozart, Hayden, Beethoven, and their counterparts never had to contemplate such contemporary conditions as going to the marketplace to recoup their investments in their compositions or going to court to protect their creative ideas against appropriation by other composers. Similarly, James Boyle has written about the oddness in using Shakespeare as the paradigm of authorship, when in fact Shakespeare wrote almost a century before invocation of the first copyright statute and, like his contemporaries such as Marlowe and Jonson, freely appropriated from a variety of sources.¹⁶¹ In some ways, the works of these great geniuses are akin to riffing in jazz, embodying great beauty and originality while also being appreciative of appropriation as a means of creation and a way of showing respect for others' brilliance.

The Slavery Question, Revisited: A Dual Economy of Music. In the U.S. copyright context, the three periods of importance are: 1831 to 1909, 1909 to 1976, and 1976 to the present. Each is relevant to understanding and developing nuanced answers to “who stole the blues?” and “who owns the blues?” The first period both encompasses and stretches beyond the nation's antebellum and Reconstruction eras, into a time that some consider a “second slavery” through such institutional conditions as the Black Codes, Jim Crow segregation, and sharecropping systems. At the same time that legal protection for notated musical scores finally crystallized, much musical work remained unprotected. What connection, if any, do the historical coincidences of race relations and copyright evolution have with the boundaries of inclusion and exclusion for certain musical creations?

“Fixed” Musical Works. Fixation plays a crucial, though overlooked, role in the developmental history of U.S. copyright law, and, thus, in any effort to untangle the complexities of race, music, technology, and law. Although “book” and “publication” were the model and threshold point, respectively, for pre-1976 copyright protection under

emotion, place, or era. Borrowing is a way for classical composers to absorb the culture around them and to mark their place in time.

Amanda Scales, Note, *Sola, Perduta, Abbandonata: Are the Copyright Act and Performing Rights Organizations Killing Classical Music?*, 7 VAND. J. ENT. L. & PRAC. 281, 284-85 (2005) (citations omitted).

¹⁶¹ BOYLE, *supra* note 31, at 163-64 & 230 n.2.

federal law, the idea of fixation is embedded in the older history of this area of law.¹⁶² U.S. copyright law did not protect music at all until 1831, when it began to grant express protection to notated musical scores.¹⁶³ Yet, even then, not all “music” fell within the scope of federal copyright protection.

The Lag Between Copyright Law and Technology. The extension of copyright protection in 1831 to notated musical scores is historically significant, in part because of the role of the printing press within the antebellum era. One consequence of the influence of the printing press was the proliferation of notated music for wide distribution and performance. Another consequence was that artists did not obtain legal protection for non-notated music, whether creative or performed. As the pace of the Industrial Revolution and resulting technological changes accelerated in the late nineteenth century, Congress began updating the federal copyright statute to reflect new communications and media technologies.¹⁶⁴ Yet an odd lag ensued because the courts denied extension of copyright protection to fixed media that were not *humanly* readable.¹⁶⁵ For example, while notated music was copyrightable, the grooves and lines of a phonorecord were not. The technology and legal idea of fixation changes greatly over time, and for our purposes, historical lacunæ in copyright protection are just as important as the scope of protected works and media.¹⁶⁶

¹⁶² Fixation involves recording a creative work in a form that can be perceived directly or by means of a device “now known or later developed.” 17 U.S.C. § 102(a) (1978). Fixation includes, but is not limited to, writing, drawing, sculpting, making notations, and recording or otherwise saving onto a permanent storage medium. Unrecorded or improvisational performances (e.g., of music, dance, or drama) are creative but are not fixed. Under the Copyright Act of 1976, federal protection of creative work attaches upon fixation rather than upon publication. In order to be copyrightable, a work must be both “creative” and “fixed” — that is, an original work of authorship fixed in a tangible medium of expression. *Id.* § 101.

¹⁶³ See General Revision of Copyright Act of Feb. 3, 1831, ch. 16, § 1, 4 Stat. 436.

¹⁶⁴ E.g., *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 248, 252 (1903) (extending copyright protection to chromolithographs); *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 54-55 (1884) (examining copyrightability of photograph and whether photograph was product of photographer or of camera). For a discussion of how copyright law has always had a difficult time adapting to new technologies, or rather lagging behind them, see Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 275 (1989).

¹⁶⁵ See *White-Smith Music Publ'g Co. v. Apollo Co.*, 209 U.S. 1, 18 (1908) (noting that piano rolls not copyrightable because they were not humanly readable).

¹⁶⁶ See Reebee Garofalo, *From Music Publishing to MP3: Music and Industry in the Twentieth Century*, 17 AM. MUSIC 318, 318-19 (1999); see also Charles Hamm, “*Hear Me Norma,*” or *Bel Canto Comes to American-Italian Opera as Popular Song*, in *YESTERDAYS: POPULAR SONG IN AMERICA* 62 (1983); LAWRENCE W. LEVINE, *HIGH BROW*,

1831! The extension of copyright protection to notated musical scores in 1831 created a dual economy in music, under which certain kinds of music (and, therefore, composers) received legal protection, and certain kinds of music (and composers) did not. In general, copyrighted (or copyrightable), notated, written scores were composed by upper middle class educated whites, while un-notated musical compositions, including those created by or within folk collectives, did not receive copyright protection. Many unprotected works were intertemporal, intergenerational, anonymous, communal, or improvisational in their composition. Thus, in general, those works that arose within collective experiences of slavery, the struggle for freedom, and post-Reconstruction subordination did not receive protection.

Syncretic, Internal, Cultural Production Within the Black Community. While it may seem unfortunate or unjust that certain musical genres remained legally unprotected, the lack of protection for un-notated musical works may have given rise to significant “internal” creative hybridization and cross-fertilization that might not have otherwise occurred. In this instance, “internal” refers to creative practices within the black community or black musical sub-communities wherein musicians borrowed from and incorporated elements from each other’s work. In the process, new musical idioms emerged that might not have arisen within a clearly delineated and regulated IP landscape. For example, the prevalence of brass instruments and the ability to play them led to their widespread use in marching bands after the Civil War, including in cities like New Orleans where many freedmen came to possess them.¹⁶⁷ Louis Armstrong syncopated the simple 4/4 beat of the military march and blended this and other contributions, such as his legendary scatting and improvisational talents, with myriad influences in urban and southern black culture, to produce a confluence that helped popularize jazz and the blues.¹⁶⁸ Cast in this light, the lack of copyright protection for un-notated musical scores during this period was a factor in the astonishing fecundity of black creative musical invention.¹⁶⁹ Copyright strictures

LOW BROW: THE EMERGENCE OF CULTURAL HIERARCHY IN AMERICA 30 (1988).

¹⁶⁷ For a documentary history on the origins and evolution of jazz music, see generally KEN BURNS, *JAZZ: GUMBO* (Public Broadcasting Service 2000).

¹⁶⁸ *Id.*

¹⁶⁹ Jaszi makes a similar point about the lack of legal protections for certain types of works giving rise to and relating to bursts of creative innovation in three periods: (1) Elizabethan theatre, including Shakespeare, that occurred even though England had no copyright law in place until the Statute of Anne almost a century after

may have hindered the internal hybridization and cross-fertilization within this climate of invention.

Breaching the Musico-Legal "Color-Line." Breaches in the copyright "color-line" characterize the second period, which stretched from 1909 to 1976, with significant and repeated breaches from the 1920s onward. Advances in recording, reproduction, manufacturing, and distribution technologies were partly responsible for this shift, including the appearance of recorded musical work (i.e., phonorecords) in the 1920s.¹⁷⁰ At first, the breaches came haltingly and occasionally, as by adventurous musicians like Bix Biederbicke and many other early jazz musicians.¹⁷¹ Then, ultimately, breaches en masse occurred in the 1950s, with Elvis Presley's appropriation of Big Mama Thornton's song "Hound Dog," the crossover white teen success of Chuck Berry, Little Richard, and Fats Domino, and the more highbrow crossovers of Charlie Parker, Dizzy Gillespie, and Miles Davis.¹⁷² Yet the internal trend in favor of musical borrowing

Shakespeare, Marlowe, and Jonson penned their works; (2) the nascent cinema, from the late 1880s into the first decade of the twentieth century, when legal protection of motion pictures was absent or uncertain (filmmakers as diverse as Thomas Edison, George Melies, Sergei Eisenstein, and Dziga Vertov appropriated elements from the theater, novels, and each other to "create" the beginning of the art of cinema); and (3) the era of early mainframe computers, from the late 1950s to the early 1970s, when computer programs were not considered protected by copyright and programmers exchanged, tweaked, and used each other's programming code to lay the groundwork for the digital revolution. In all these examples, Jaszi points out, appropriation was not only permissible, but in many cases was embraced and indeed constitutive of the new forms that were being created. Jaszi, *supra* note 34, at 35.

¹⁷⁰ The Supreme Court held in *White-Smith Music Publishing* that piano rolls used in mechanized piano players were not copies of the music. *White-Smith Music Publ'g Co. v. Apollo Co.*, 209 U.S. 1, 18 (1908). In response, one year later, Congress extended copyright protection to phonorecords. See H.R. REP. NO. 2222, at 9 (1909). This led to their increasing use and popularity. The exclusive right to control the reproduction of copies of copyrighted works in phonorecords is retained in the 1976 Copyright Act. 17 U.S.C. § 106(1) (2006).

¹⁷¹ Many integrated jazz bands encountered difficulties when touring racially segregated areas. For example, the International Sweethearts of Rhythm, an integrated, all-women's jazz band which featured some of the best female musicians of the 1940s, were forced to eat and sleep in a bus due to segregation laws, despite the fact that they were recognized bona fide stars at clubs and theaters around the country. See, e.g., GRETA SCHILLER & ANDREA WEISS, *INTERNATIONAL SWEETHEARTS OF RHYTHM: AMERICA'S HOTTEST ALL-GIRL BAND* (1986) (documenting story and difficulties of multi-racial, all-women's jazz band, International Sweethearts of Rhythm).

¹⁷² See Olufunmilayo B. Arewa, *From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context*, 84 N.C. L. REV. 547, 617 (2006) (citing Arnold Shaw, *Researching Rhythm & Blues*, 1 BLACK MUSIC RES. J. 71, 74 (1980)).

continued *after* copyright protection included fixed (recorded) musical performances (rather than just notated musical text) and after white appropriation of jazz and the blues had begun.

The “Elvis/Alan Freed/et al.” Rip-Off. Whatever else went into rock and roll, the blues was a large part of the mix.¹⁷³ In this context, Greene’s work is exceptionally strong as it delineates particular distributive problems that arose during the third time period, from 1976 to the present. What troubles Greene, and many others, is not musical appropriation per se, but rather the racialized, apparently unilateral flow of musical appropriation practices. Namely, the external appropriation of musical modes, genres, and ideas away from the communities and individuals that produced and sustained hybrid creative practices, generally with little or no compensation. Unscrupulous disc jockeys, music publishers, and promoters “ripped off” many black artists who were unfamiliar with copyright law. Meanwhile, popular white musicians in the United States and the United Kingdom appropriated not only sounds and styles but also lyrics and entire songs without acknowledgement, attribution, or authorization. For example, Led Zeppelin’s hit single “Whole Lotta

¹⁷³ See generally MICHAEL CAMPBELL & JAMES BRODY, *ROCK AND ROLL: AN INTRODUCTION* (1999) (tracing hybrid mid-twentieth century development of rock and roll and its link with blues and other forms of American music); KATHERINE CHARLTON, *ROCK MUSIC STYLES: A HISTORY* (4th ed. 2003) (discussing stylistic influence of blues on rock and roll musicians such as Chuck Berry and Elvis Presley); SAMUEL CHARTERS, *THE BLUESMEN: THE STORY AND THE MUSIC OF THE MEN WHO MADE THE BLUES* (1967) (examining history and development of major blues figures such as Charles Patton, Robert Johnson, and Willie Dixon); JAMES H. CONE, *THE SPIRITUALS AND THE BLUES: AN INTERPRETATION* (1972) (arguing that despite secular nature of blues, there are strong historical and musical undercurrents that relate to nineteenth century black spirituals); ANTHONY CONNOR & ROBERT NEFF, *THE BLUES: IN IMAGES AND INTERVIEWS* (Cooper Square Press 1999) (1975) (describing firsthand interview with bluesmen talking about their music); FRANCIS DAVIS, *THE HISTORY OF THE BLUES* (1995) (tracing myriad influences — musical, economic, and technological — on blues and blues musicians through twentieth century); GERARD HERZHAFT, *ENCYCLOPEDIA OF THE BLUES* (2d ed. 1997) (compendium of information about blues and blues musicians); ALAN LOMAX, *THE LAND WHERE THE BLUES BEGAN* (1993) (accounting of Mississippi Delta, including New Orleans, where blues as musical form originated in late nineteenth and early twentieth centuries); NOTHING BUT THE BLUES: *THE MUSIC AND THE MUSICIANS* (Lawrence Cohn ed., 1993) (studying closely blues and examining major blues figures); PAUL OLIVER, *CONVERSATION WITH THE BLUES* (2d ed. 1997) (compilation of interviews with variety of southern blues singers originally done by Oliver in 1960); ROBERT SARTELLI, *THE BIG BOOK OF BLUES* (1993) (compendium of information about blues); CLYDE WOODS, *DEVELOPMENT ARRESTED: RACE, POWER AND THE BLUES IN THE MISSISSIPPI DELTA* (1998) (arguing that blues embodies complex interaction between racial subordination and resistance to that subordination in rural, southern United States in early twentieth century).

Love” (1969) unmistakably copied an earlier song, “You Need Love,” written by blues musician-songwriter-arranger-record producer Willie Dixon.¹⁷⁴ One might imagine doing as Dixon eventually did — consulting an IP lawyer about suing Led Zeppelin for infringement, then receiving a substantial settlement, copyright protection, and royalties for himself and his heirs. Under the conventional system, this is a clear legal and economic vindication of Dixon’s IP right. Case closed? Perhaps not.

Waters v. Dixon? The complexities and ironies in the Willie Dixon-Led Zeppelin example might vex many IP lawyers. The Small Faces, a 1960s band after whom Led Zeppelin fashioned themselves,¹⁷⁵ recorded “You Need Loving” (1966) based on the Muddy Waters song “You Need Love” (1962), which Dixon wrote and composed. Neither the Small Faces nor Led Zeppelin acknowledged the Waters-Dixon collaboration. Dixon and Waters were signed to Arc Music, the publishing arm of Chess Record started by the Chess brothers and the Goodman brothers (of Benny Goodman fame) to handle copyright issues on original works and collect and retain the bulk of Chess-related royalties.¹⁷⁶

¹⁷⁴ For an autobiographical history of Willie Dixon’s influential role in blues music, see WILLIE DIXON & DON SNOWDEN, *I AM THE BLUES: THE WILLIE DIXON STORY* 218, 223 (1989). For an in-depth study of Willie Dixon’s work, musical influences, and contributions to the blues, see MITSUTOSHI INABA, *WILLIE DIXON’S WORK ON THE BLUES: FROM THE EARLY RECORDINGS THROUGH THE CHESS AND COBRA YEARS, 1940-1971* (2005); VAIDHYANATHAN, *supra* note 31, at 117; see also *BLUESLAND: PORTRAITS OF TWELVE MAJOR AMERICAN BLUES MASTERS* (Pete Weldin & Toby Byron eds., 1991); *THE VOICES OF THE BLUES: CLASSIC INTERVIEWS FROM LIVING BLUES MAGAZINE* (Jim O’Neal & Amy van Singel eds., 2002); Anthony DeCurtis, *Willie Dixon and the Wisdom of the Blues*, *ROLLING STONE*, Mar. 23, 1989, at 109, 109-14; Worth Long, *The Wisdom of the Blues — Defining Blues as the True Facts of Life: An Interview with Willie Dixon*, 29 *AFR. AM. REV.* 207, 207-12 (1995).

¹⁷⁵ For a discussion of the Small Faces’ influence on Led Zeppelin, see generally PAOLO HEWITT, *THE YOUNG MODS’ FORGOTTEN STORY* (1995), *referenced in* Will Shade, *The Thieving Magpies: Jimmy Page’s Dubious Recording Legacy, Part 2*, *PERFECT SOUND FOREVER*, Jan. 2001, available at <http://www.furious.com/perfect/yardbirds2.html>.

¹⁷⁶ See generally INABA, *supra* note 174, at 274-76, 278-82 (citations omitted). Historically, blues record sales occupied a small niche, with blues recordings intended primarily for sale within the black community. This niche status meant lower sales, and, therefore, relatively higher recording and production costs offset by low-ball royalty arrangements. Few recording artists of any background knew much, if anything, about copyright law at the time, and copyright fees and royalties payments were meager industry-wide. For detailed histories on the legacy and influence of Chess Records and the role of “race” records in mid-twentieth century America, see NADINE COHODAS, *SPINNING BLUES INTO GOLD: THE CHESS BROTHERS AND THE LEGENDARY CHESS RECORDS* (2000); JOHN COLLIS, *THE STORY OF CHESS RECORDS* (1998). For a comprehensive listing of records put out by Chess Records, see MICHAEL RUPPLI, *THE*

Unattributed (and Uncompensated) Sources? It was common within blues traditions to adapt and record songs that had circulated for many years — even generations — without knowing who originally wrote them, and often performing or recording them without attribution. In the case of “You Need Love,” blues historian Mitsutoshi Inaba notes that Waters and Dixon wrote the words and recorded the song, respectively.¹⁷⁷ However, “the vocal melody is traced back to Petway’s ‘Cat Fish Blues’ by way of Muddy Waters’ ‘Rolling Stone’ and ‘Still a Fool,’ although neither Muddy Waters, Petway, nor Earl Hooker, the last of whom was responsible for the backing track, is credited as the composer for ‘You Need Love.’”¹⁷⁸

A Falling Out and Lawsuits. After many years of working together, Dixon and Waters had a falling out over compensation issues. In particular, they disagreed on how much each should receive for their collaborations under the Chess label. Arc Music never sued Led Zeppelin (let alone the Small Faces) for copyright infringement on “You Need Love.” And although Dixon and Waters received a generous out of court settlement from their lawsuit against Arc Music to recover royalties for “Bring It on Home” (another song Led Zeppelin had copied), only Dixon brought suit against Led Zeppelin for “You Need Love”-“Whole Lotta Love.”¹⁷⁹ Dixon subsequently

CHESS LABELS: A DISCOGRAPHY (1988).

¹⁷⁷ See INABA, *supra* note 174, at 298-315. Inaba argues that a deep creative syncretism existed between Dixon and Waters. On the one hand, Dixon wrote songs for Waters, based on the womanizer-secular-vooodoo-preacher-outlaw persona that Dixon’s songs helped craft. On the other hand, Dixon’s own musical evolution may have resulted, in part, from exploring Waters’s innovation of the “modern blues” or “urban blues” sound on songs like “She Moves Me” and “Still a Fool.” It was perhaps through hearing what Dixon described as Waters’s introduction of “pep” into the Delta Blues, thereby transforming its sound, that Dixon himself came to experiment with and compose songs that used 8-bar, 16-bar, 20-bar, and 32-bar variants of traditional 12-bar blues. For discussions of the Dixon-Waters relationship and reciprocal influence, and blues tropes woven into Waters’s persona and Dixon’s compositions, see generally BLUESLAND, *supra* note 174; STANLEY BOOTH, RHYTHM OIL: A JOURNEY THROUGH THE MUSIC OF THE AMERICAN SOUTH (1991); DIXON & SNOWDEN, *supra* note 174; HENRY LOUIS GATES, JR., THE SIGNIFYING MONKEY: A THEORY OF AFRICAN-AMERICAN LITERARY CRITICISM (1988); ROBERT GORDON, CAN’T BE SATISFIED: THE LIFE AND TIMES OF MUDDY WATERS (2002); PAUL OLIVER, BLUES FELL THIS MORNING: MEANING IN THE BLUES (2d rev. ed. 1990); JOHN W. ROBERTS, FROM TRICKSTER TO BADMAN: THE BLACK FOLK HERO IN SLAVERY AND FREEDOM (1989); SANDRA TOOZE, MUDDY WATERS: THE MOJO MAN (1997); WOODS, *supra* note 173; DeCurtis, *supra* note 174; Long, *supra* note 174.

¹⁷⁸ INABA, *supra* note 174, at 592-93.

¹⁷⁹ In the 1970s Arc Music successfully sued Led Zeppelin for copyright infringement of Dixon’s song “Bring It on Home,” which appears on *Led Zeppelin I*.

received a settlement from Led Zeppelin for the copyright infringement.

Whole Lotta Litigation. Dixon ultimately settled out of court in 1987, nearly two decades after Led Zeppelin recorded “Whole Lotta Love” and more than a half-decade after they disbanded. Led Zeppelin singer Robert Plant maintains that the band thought it was simply participating in and contributing to a “quite translucent and almost eternal” flow in music that “moved on down through time.”¹⁸⁰ Plant stated, “I just thought it was part of the game. I know that might sound naïve and irresponsible Our version was a conglomeration with originality and the lift of the lyric.”¹⁸¹ Today, “Whole Lotta Love” credits Dixon as writer and Led Zeppelin’s members as creative contributors, though none of these men wrote the original melody.

Chain of Fools? Should Dixon have been allowed to bring suit for the taking of his words? Should the doctrine of laches have applied, given the enormity of Led Zeppelin’s commercial notoriety and success in the years that passed before Dixon attempted to assert his rights?¹⁸² Should Muddy Waters’s estate initiate a lawsuit against

Although Arc won the case, Dixon himself received no benefit until Dixon’s manager audited Arc’s accounts. Dixon and Waters subsequently sued Arc to recover royalties and ownership of their copyrights. *Id.* at 283 (“In 1977, Dixon and Muddy Waters, with the aid of their business manager of the time, Scott Cameron, sued Arc Music. As a result Dixon received his songs that were formerly published by Arc Music and started Hoochie Coochie Music.”).

¹⁸⁰ Interview by Terry Gross with Robert Plant, former singer of Led Zeppelin, on *Fresh Air* (NPR radio broadcast, Aug. 24, 2004), available at <http://www.npr.org/templates/story/story.php?storyID=3868283>.

¹⁸¹ *Id.*

¹⁸² In some cases, late-in-the-game IP litigation against select targets in a very long chain of actors has provided the only substantive equalization against stark, absurdly inequalitarian distributive effects of copyright law and musical appropriation. For example, the origins of the famous song “The Lion Sleeps Tonight” are traceable back to a 1939 recording by Zulu Solomon Linda. Linda’s original recording “Mbube” (Zulu for “the Lion”), was adapted and transformed many times over the next two-plus decades, with some new lyrical additions and misinterpretations of others, such as Pete Seeger’s transposition of “Mbube” (pronounced “EEM-boo-beh”) with “wimoweh.” It has been reported that some 150 artists have recorded the song, whether in today’s popularized version, covers of Linda’s original song, or anything in between. “The Lion Sleeps Tonight” has been recorded and translated in many languages and has been used in 13 movies. For all of this, Linda received today’s equivalent of 87 cents when he signed over the copyright of “Mbube” in 1952. He also received a job sweeping floors and serving tea for the company that originally purchased his song. Eventually, Linda’s survivors began to receive modest royalties for Disney’s use of “The Lion Sleeps Tonight” (perhaps as much as \$17,000 from 1991 to 2000). In February 2006, Linda’s family reached a settlement agreement with Abilene Music, the publishing house that now owns “The Lion Sleeps Tonight.” The

Willie Dixon's estate for a share of the "You Need Love" settlement?

Beethoven v. Brahms? Within the blues and other American black musical traditions, internal appropriation or borrowing was commonplace. In some respects, this is similar to the creative climate in Europe during the Classical and Baroque eras. What makes internal appropriation or borrowing "internal" rather than "external?" Why, if at all, is internal appropriation or borrowing by Dixon and Waters somehow less problematic from creative and legal standpoints than cross-racial, cross-generational, external appropriation by groups like Cream, the Doors, Led Zeppelin, and the Rolling Stones from Dixon and Waters, among others?¹⁸³ *Estate of Beethoven v. Estate of Brahms*, anyone?

The 12-Bar Blues Form. At the core of blues standards like Robert Johnson's "Walking Blues" and Muddy Waters's "Country Blues" is the traditional 12-bar blues form.¹⁸⁴ This is the basic vehicle upon which almost every blues, rock and roll, and even country musician makes variations.¹⁸⁵ As Willie Dixon once said, "The Blues are the roots; everything else is the fruits." But where did the 12-bar blues come from? Who owns it? Is it something that can be *owned*? If so — or if not — then who owns the blues? In some ways, the rhythms and feel of the music that came out of New Orleans around the turn of the twentieth century gave rise to the 12-bar blues. The existence of this music owes large debts to events and generations that are part of the centuries-long African Diaspora. This includes anonymous

settlement includes Abilene's agreement to pay Linda's family royalties from 1987 forward. See Sharon LaFraniere, *In the Jungle, the Unjust Jungle, a Small Victory*, N. Y. TIMES, Mar. 22, 2006, at A1.

¹⁸³ See INABA, *supra* note 174, at 568 ("Before a majority of American audiences got to know Dixon's songs through records by the Rolling Stones, Cream, Led Zeppelin, Jeff Beck Group, and the Doors, the Blues had been introduced as a genre of folk music to white audiences in the early 1960s.").

¹⁸⁴ Twelve-bar blues is comprised of 12 four-beat measures in a I-IV-V guitar or piano chord progression with major sevenths.

¹⁸⁵ See Patrick MacFarlane, *Guitar Lesson World*, Lesson 25: 12 Bar Blues, Part 1, <http://www.guitarlessonworld.com/lessons/lesson25.htm> (last visited Nov. 28, 2006); see also Richard Cole & Ed Schwartz, *Virginia Tech Multimedia Music Dictionary*, 12-Bar Blues, <http://www.music.vt.edu/musicdictionary/text1-9/12-barblues.html> (last visited Nov. 28, 2006); Wikipedia, Chord Progression, http://en.wikipedia.org/wiki/Chord_progression (last visited Nov. 28, 2006). A chord progression is a series of musical chords played in some time-sequential manner. The progression typically shares some notes, providing the passage with a kind of linear continuity and coherence. The most common chord progressions are based on the first, fourth, and fifth scale degrees which are typical in 3-chord song, 8-bar blues, and 12-bar blues. The chord based on the second scale degree is the most common chord progression in jazz.

generations of West African and Afro-Caribbean musicians, post-Civil War dissemination of portable brass instruments, and the centrality of spirituals in the antebellum era and the black church after the Civil War.

*Recoding Standards as Cultural Practice.*¹⁸⁶ One may also consider the “secret” or “coded” countercultures that John Coltrane, Miles Davis, Charlie Parker, and other jazz musicians lived in, and view them as attempts to carry on older blues-based traditions within the context of mid-twentieth century racial segregation. These artists took Tin Pan Alley standards like “Bye Bye Blackbird,”¹⁸⁷ “My Favorite Things,”¹⁸⁸ and “How High the Moon,”¹⁸⁹ and dramatically and

¹⁸⁶ See generally Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 YALE L.J. 273, 348-49 (2004) (“[I]t is odd to think of cultural production as an area that ever came to be ‘dominated,’ in any useful meaning of the word, by market production. . . . Our understanding of information, knowledge, and culture as ‘public goods’ in the formal economic sense should have immunized us from mistaking the presence of important market-based approaches for the whole, or even the core, of the story of information and cultural production.”).

¹⁸⁷ MILES DAVIS, *Bye Bye Blackbird*, on THE COMPLETE MILES DAVIS FEATURING JOHN COLTRANE (Columbia/Legacy 2000). Born Miles Dewey Davis III on May 25, 1926, Davis was variously called “the Father of Cool and the Prince of Darkness.” NOTABLE BLACK AMERICAN MEN 262 (Jessee Carney Smith ed., 1999) [hereinafter NOTABLE]. He stands out as one of Jazz’s prime innovators. *Id.* As a young musician, Davis spent a year at Juilliard before electing not to return. *Id.* at 262-63. His first important recording session was in 1945 when asked to do a recording for the Savoy label. *Id.* at 263. During these early years, Davis slowly developed his own style of playing, preferring the middle register and using a sparse, lyrical tone that was resonant and intense but without the vibrato. *Id.* In 1958, he changed course again, this time recording the album *Milestones* where he first wrote in the modal form. *Id.* “Davis’s creativity was inhibited from 1975 to 1981 because illness and his heavy drug use forced him to take a six-year hiatus.” *Id.* He returned, forging yet another frontier in jazz this time recording a rock and funk album. *Id.* Some critics saw this move as a sell-out to commercialism. *Id.* He passed away on September 28, 1991. *Id.* at 264.

¹⁸⁸ JOHN COLTRANE, *My Favorite Things*, on MY FAVORITE THINGS (Rhino Atlantic 2005). John Coltrane has been variously described as “a consummate musician and band leader, an innovator in the avant garde and free jazz era.” NOTABLE, *supra* note 187, at 220. Born on September 23, 1926, Coltrane’s career drew him to New York in the 1950s. *Id.* Coltrane turned out to be a rather prolific recording artist. *Id.* at 222. Between 1949 and 1967, he is reported to have been featured in at least 110 recordings. *Id.* The most significant of Coltrane’s collaborations were those with Dizzy Gillespie, Thelonius Monk, and Miles Davis. *Id.* Earlier in Coltrane’s career, Monk had introduced him to innovative and unexpected harmonies, the proper use of “space,” the “stacking” of chords, and the use of modal scales and harmonies. *Id.* His diversity as an expressionist in music is preserved in his numerous recordings. He died on July 17, 1967. *Id.* at 221.

¹⁸⁹ CHARLIE PARKER, *How High the Moon*, on NEW BIRD (The Orchard 1999). Charlie

radically transformed or recoded them. This practice of covering standards or recording familiar songs of uncertain or communal origins also meant that record companies saved greatly on copyright fees and royalties.

Limited Commons: Commons on the Inside, Private Property on the Outside. Professors Carol Rose¹⁹⁰ and Elinor Ostrom¹⁹¹ both provide useful frameworks for thinking about the “commons,” musical or otherwise. These ideas help advance the discussion of the “who owns the blues?” question with attention to the internal-external dilemma and its relevance to IP law. Rose argues that Garrett Hardin’s “Tragedy of the Commons” was actually not a true “commons.”¹⁹² Rather, Hardin’s denuded grazing “commons” was actually a situation where *no one* had the legal right to exclude anyone from accessing the common pasture. Common use such as this could lead to overgrazing and exhaustion of a resource that was open to all. Rose has helpfully described a “limited commons” — a “commons” on the inside and “private property” on the outside — in which members of the community wishing to preserve the resource subject to the “limited commons” framework will devise governance mechanisms for insiders to share access to the resource and set conditions for outsiders either to access the resource as regulated or else be excluded.¹⁹³

Where Is “Custom” in Copyright? Copyright law seems oblivious to distinctions and differences in custom. For example, those oftentimes

Parker is one of the most seminal figures to appear in the American Jazz scene. NOTABLE, *supra* note 187, at 904. Born in 1920, Parker, a phenomenal saxophonist, was tutored in scales and harmonies by his colleagues who included, among others, Tommy Douglas and Buster Smith. *Id.* His role model was Lester Young, a man whose playing style he tried to emulate from breathing to support techniques. *Id.* “By long and arduous practice, he built a strong technical foundation to the point where . . . he had no peer as a master of his instrument.” *Id.* Raised and nurtured in Kansas City, Parker migrated to New York City where he soon earned the respect of fans and critics alike. *Id.* at 904-07. In the early 1940s, Parker was at the forefront of a new movement — the musical style “bop” had come into existence after evolving from a series of after-hours jam sessions. *Id.* at 905. Like other jazz musicians of his time, Parker earned his livelihood from being a member of organized bands and from recording sessions. *Id.* at 905-07. He passed away in 1955. *Id.* at 906.

¹⁹⁰ See generally Rose, *supra* note 52 (discussing nature of commons); Carol Rose, *Left Brain, Right Brain and History in the New Law and Economics of Property*, 79 OR. L. REV. 479, 484 (2000) [hereinafter Rose, *Left Brain*] (discussing limited commons properties).

¹⁹¹ OSTROM, *supra* note 52, at 29-55.

¹⁹² Rose, *Left Brain*, *supra* note 190, at 484-85. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968). This article has prompted other commentators to weigh in on the issue. See, e.g., Heller, *supra* note 50.

¹⁹³ Rose, *Left Brain*, *supra* note 190, at 480-81.

customary and informal practices that permit, and indeed encourage, shared access to and use of a resource by some subset of a particular creative community otherwise remain available to the general public only upon payment of a fee.¹⁹⁴ The difference in uncompensated appropriation in these two contexts is, by analogy, the difference between borrowing a book from a public library and shoplifting one from a bookstore.

“Fake Books” as Copyright Infringement. An illustration of this informal limited commons is the pervasive presence of what are called “fake books,” which are widely available contraband in music schools.¹⁹⁵ Fake books are technically illegal, yet widely circulated books of scores with the melodic structures of popular copyrighted music, although without orchestration or chording. Some of these collections are called “real books,” claiming that the music in fake books is wrong, or fake. Music students usually claim ignorance when asked about the origins of these *samizdat*, oft-photocopied, handwritten scores in loose-leaf binders.¹⁹⁶ No one has copyright permission to distribute or use them, but music students and many musicians possess and use these ubiquitous infringing artifacts. In fact, when many groups of jazz musicians get together to play they will say, “Here’s the fake (or real) book sheet” and then hand out the photocopied music. This custom lives on, underground.

No Such Thing in U.S. Copyright Law. There might be ways in which

¹⁹⁴ One might consider some of these practices as forms of “poor people’s knowledge.” Coenraad J. Visser, *Making Intellectual Property Law Work for Traditional Knowledge*, in *POOR PEOPLE’S KNOWLEDGE: PROMOTING INTELLECTUAL PROPERTY IN DEVELOPING COUNTRIES* 207 (J. Michael Finger & Philip Schuler eds., 2004). *But cf.* Madhavi Sunder, *The Invention of Traditional Knowledge*, 69 *LAW & CONTEMP. PROBS.* (forthcoming 2007), available at <http://ssrn.com/abstract=890657>.

¹⁹⁵ A fake book is:

[A] collection of musical lead sheets intended to help a performer quickly learn new songs. Each fake book contains the melody line, basic chords, and lyrics. The fake book is a central part of the culture of playing music in public, particularly in jazz, where improvisation is particularly valued. . . . Despite the name, “fake books” are often unbound, consisting of a thick, loose stack of sheets.

Wikipedia, Fake Book, http://en.wikipedia.org/wiki/Fake_book (last visited Jan. 31, 2007).

¹⁹⁶ For a discussion on the mid-twentieth century Soviet origins of the term “*samizdat*,” which refers to practices of and venues for self-publishing outside the scope of officially approved publication channels, see Sharon Balazs, *Samizdat and the Internet, Samizdat — A Brief History*, <http://www.slis.ualberta.ca/issues/sbalazs/history.htm> (last visited Nov. 28, 2006).

copyright law is already, or may yet become, sensitive to distinctions between insider and outsider and internal and external for purposes of examining creative appropriation or borrowing. For example, permitting and encouraging shared access to and use of a resource by some subset of a particular creative community while otherwise making access and use available to the wider public only upon payment of a fee. Fair use is one possible avenue.¹⁹⁷ This doctrine allows private parties to use copyrighted works they have lawfully acquired. The idea-expression dichotomy¹⁹⁸ and *scenes à faire*¹⁹⁹ represent doctrines that might also be adaptable, but none of them really solve the problem.

The Age of Appropriation. The fourth and final period is from 1976 to the present, which many term as the Age of Appropriation, about which much has already been written. This period is also called the Age of Strong Copyright; but why should we call it this? One facetious reaction could be that “when appropriation is outlawed, then only outlaws will appropriate.” Undeniably, copyright laws have expanded their scope to take in more and more of the creative activities we engage in with our lives, particularly in our musical lives. Sunder has written that “we must be wary of cultural protectionist arguments in a modern world characterized by culture flows facilitated by technology, diaspora, globalization, and liberalization. For better or worse, diaspora and new technologies facilitate the flow of culture and are a source of new ideas, language, and identities.”²⁰⁰ Currently, there seems to be a movement to leave consumers with only the right to listen passively to a piece of music. Virtually anything else will be an illegal appropriation of someone else’s private property. The

¹⁹⁷ For a discussion on fair use and its limitations, especially in a technologically evolving environment, see generally Van Houweling, *supra* note 40. For a thorough treatment of how to reconstruct this ailing doctrine, see generally Fisher, *supra* note 20.

¹⁹⁸ This dichotomy relates to copyrightability and is grounded in a statutory pronouncement that “an original work of authorship [does not] extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.” 17 U.S.C. § 102(b) (2006).

¹⁹⁹ Hon. Leon R. Yankwich, *Originality in the Law of Intellectual Property (Its Meaning from a Legal and Literary Standpoint)*, 11 F.R.D. 457, 462 (S.D. Cal. 1951) (“[W]hen you are dealing with a common idea, no matter how different the treatment may be, common elements will appear in both products. . . . [S]imilarities may appear which are inherent in a situation. The French refer to them as *scènes a faire* — that is, scenes which must follow a certain situation.”).

²⁰⁰ Madhavi Sunder, *Intellectual Property and Identity Politics: Playing with Fire*, 4 J. GENDER RACE & JUST. 69, 94-95 (2000).

development of digital technology is forcing an issue created by the invention of the printing press. As Paul Goldstein observes, “All of these decisions, whether made in the courts, legislatures, or private law offices, have a single result: when copyright gives control to one person, it extracts some measure of freedom to imitate from everyone else.”²⁰¹ As a result, we need to develop frameworks, institutionally speaking, to study the no longer submerged distributive issues in the IP area.

Syncretism Again. How might the hybrid, syncretic, and collective practices of a community — whether defined racially, culturally, or otherwise — be sustained in the wake of the expanding scope of IP protection and regulation? Is the public domain in American copyright getting “too small”? Is there space for incorporating Chon’s “substantive equality principle” into the area of musical cultural production? Some tentative conclusions may be drawn from this examination. The first conclusion is based on the Foucaultian insight that power will never be totalized.²⁰² Power always engenders resistance, and, therefore, hybrid and syncretic practices create spaces of resistance to the various hegemonic assertions, whether occurring historically under racial subordination or contemporarily in the current era of globalization. Indeed, as the scope of IP laws broadens, one may imagine an increased number of fora where hybrid and syncretic sensibilities and practices will emerge. Thus, it is important to avoid the reification of ideas like the public domain. Rather, one might preferably understand the public domain to be a dynamic and contested discourse, not a “thing” to be preserved. A second and related conclusion is that hybrid and syncretic practices contest the integrity of national boundaries. Questions like “is the public domain too small within the United States?” implicate the question “is the public domain too big outside the United States?,” and vice versa. Finally, a “substantive equality principle” as an analytic thread for assessing IP’s distributive effects needs to “look to the bottom” to question whether IP laws are being enforced to disadvantage or subordinate individuals, groups, and nations at the bottom of the

²⁰¹ PAUL GOLDSTEIN, *COPYRIGHT’S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX* 6 (1994).

²⁰² For theoretical analyses of how modern society exercises its controlling systems of power-knowledge via panoptic surveillance on an increasingly individualized and internal basis, and an analysis on the ways that power engenders resistance, see MICHEL FOUCAULT, *DISCIPLINE AND PUNISH: THE BIRTH OF THE PRISON* (1977); Michel Foucault, *The Subject and Power*, in MICHEL FOUCAULT: *BEYOND STRUCTURALISM AND HERMENEUTICS* (Hubert Dreyfus & Paul Rabinow eds., 1982).

socio-economic-legal system.²⁰³ Then, we should also ask ourselves: is this the best that we can do?

IV. DISTRIBUTIVE VALUES AND THE EMERGING GLOBAL INTELLECTUAL PROPERTY REGIME

The redistribution of property rights . . . involves a transfer of knowledge from the information commons into private hands . . . belong[ing] to media conglomerates and integrated life sciences corporations rather than individual scientists and authors. The effect . . . is to raise the level of private monopolistic power to dangerous global heights, at a time when states, which have been weakened by the forces of globalization, have less capacity to protect their citizens from the consequences of the exercise of this power . . . [and] squares with no theory of justice . . . except the one that Thrasymachus gives to Socrates in Plato's Republic: I define justice or right as what is in the interest of the stronger party.²⁰⁴

Without ignoring the importance of economic growth, we must look well beyond it.²⁰⁵

Globalization. The tales of the previous two sections focus on domestic racial subordination, albeit with distinct global significance through the transatlantic slave trade and slavery-based agricultural economies, and later through "British Invasion" and white American rock and roll appropriations of black American blues traditions. The tale that informs the final section of this Article is a tale of explicitly global subordination in the contemporary era, highlighting the distributional critique of either having too much faith in (intellectual) property or in the public domain. They are two tremendously indeterminate sides of the same coin. As discussed in the Introduction of this Article, the characterization of something as "property" simply questions how a particular bundle of rights advances or thwarts certain policy initiatives, some of which may be politically controversial. "Property" simply begins rather than ends that process,

²⁰³ For the groundbreaking articulation of this notion within critical legal scholarship, see Mari J. Matsuda, *Looking to the Bottom: Critical Legal Studies and Reparations*, 22 HARV. C.R.-C.L. L. REV. 323, 326-31 (1987).

²⁰⁴ DRAHOS WITH BRAITHWAITE, *supra* note 15, at 1- 3, 15-16.

²⁰⁵ SEN, *supra* note 15, at 14.

and does so without resolving what will be the content and cost of such categorization. Similarly, there is not, nor should there be, a transcendental, romanticized public domain. Rather, when invoking the public domain we should question the reasons we are using that characterization, and what might be the drawbacks of using such a powerful trope.

Can You Jump from the Historical, Domestic U.S. to Global Analytic Frameworks? While the answer to this question is beyond the scope of this Article, a brief functional answer inspects the problem of structural subordination. There are many important parallels between historical structural subordination of racial groups within the United States and contemporary structural subordination of countries and people living in the global South. Not the least of these parallels is the subordinating role that race played in colonialism and its attendant institution, slavery. A focus on the strand of structural subordination provides a unifying, if controversial, analytic thread with which to begin thinking about the effects of globalization, historically or in the present time.

A. *Coercion, Developing Nations, and the Emerging Global Intellectual Property Regime*

Three Periods. Okediji outlines the historical relationship between international law, IP rights, and the developing world.²⁰⁶ In showing how IP evolved to become the integral component of the international economic order, Okediji identifies three distinct periods of “intellectual property multilateralism.”²⁰⁷

IP as Colonial and “Noblesse Oblige.” The first multilateralism, from the 1500s to 1945, suggests that, even prior to the end of the nineteenth century, many territories in Africa, Asia, and the Pacific were already subject to IP conventions and regulations implemented through formal and informal European control.²⁰⁸ These alien regulations started out as a byproduct of early commercial interactions between Europeans and non-Europeans; interactions which necessitated the negotiation of legal arrangements to govern relations.²⁰⁹ These arrangements unsurprisingly had a European

²⁰⁶ Ruth L. Okediji, *The International Relations of Intellectual Property: Narratives of Developing Country Participation in the Global Intellectual Property System*, 7 SING. J. INT'L & COMP. L. 315, 319-20 (2003).

²⁰⁷ *Id.* at 319.

²⁰⁸ *Id.* at 323 (referring to Paris and Berne conventions).

²⁰⁹ *Id.* at 321.

flavor, due in no small part to a self-perceived superiority and attendant “responsibility” to “civilize” the non-Europeans.²¹⁰ The consolidation of formal colonial rule in which IP laws were an integral part soon followed.²¹¹ IP laws were extended to colonies during this period, in part to advance colonial strategies of assimilation, incorporation, and control.²¹²

After Empire, Formal Equality (but Substantive Inequality) of Nations. According to Okediji, the second multilateralism, from 1945 to the 1990s, accompanied the demise of colonialism and attendant debates as to the appropriate role for developing countries in the international IP system.²¹³ New sovereign states were first recognized, and then conditions were constructed for their participation in international fora without interrogation into the appropriateness or value of IP laws in their respective domestic settings.²¹⁴ The result was a legitimization of developing countries’ adherence to colonial-era legislation under the guise of an international legal system wholly unrelated to domestic priorities and constraints.²¹⁵ Meanwhile, treaties used for the effective subjugation of non-Europeans in the colonial period continued to be the formal tool of choice to facilitate the developed countries’ strategic exercise of power.²¹⁶

B. “Seed Wars”: From “Common Heritage” to “Sovereign Property”

Curiously Rising “Minimum Standards” in TRIPS. In Okediji’s view, the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”),²¹⁷ a component of the World Trade Organization (“WTO”), served as the starting point for the third multilateralism.²¹⁸

²¹⁰ See *id.* at 321-22.

²¹¹ *Id.* at 324.

²¹² *Id.* at 325.

²¹³ *Id.* at 325-26.

²¹⁴ *Id.* at 333.

²¹⁵ *Id.*

²¹⁶ See *id.*

²¹⁷ See TRIPS, *supra* note 17. TRIPS is administered by the World Trade Organization (“WTO”) under the General Agreement on Tariffs and Trade (“GATT”). One hundred twenty-five countries signed onto TRIPS in 1994, and, thus, TRIPS establishes minimum standards for most forms of IP regulation within all WTO member countries. In particular, TRIPS establishes copyright and other rights, enforcement procedures, remedies, and dispute resolution procedures on: the rights of performers, producers of sound recordings, and broadcast organizations; trademarks; patents and the protection of new varieties of plants; and undisclosed and confidential information, including trade secrets and test data.

²¹⁸ See Okediji, *supra* note 206, at 333.

TRIPS sought to upgrade and update IP laws in mostly developing countries. Many of these countries had domestic laws dating back to the colonial era that were either obsolete or enforced in such a way as to draw ire from developed states.²¹⁹ Indeed, this latest multilateralism would not have come to fruition but for the framework of existing laws present in many developing states.²²⁰ As Okediji notes, there seems to have been a constant evolution from state practice to bilateralism, to multilateralism, to regionalism. Throughout this process, “these various systems [served] as confirmation of the status of developing countries as ‘sovereigns’ with attendant obligations disguised as privileges.”²²¹

*Food Supply Is Fundamental.*²²² Agriculture is undoubtedly what Chon would call a global public good, particularly sustainable agriculture that provides an inexpensive, secure, diverse, and widely available food supply for individuals, groups, regions, and nations.²²³ The history of agriculture up to the past century can be characterized by the *non-commodification* of seed germplasm and the ability of farmers to access it freely and without restriction as part of the selective process that produced the varieties of major food crops.²²⁴

²¹⁹ *Id.* at 335-36.

²²⁰ *Id.* at 339-40.

²²¹ *Id.* at 338-40.

²²² For an examination of various aspects of the global food system with particular emphasis on plant breeding and agricultural research, see CROP VARIETY IMPROVEMENT AND ITS EFFECT ON PRODUCTIVITY: THE IMPACT OF INTERNATIONAL AGRICULTURAL RESEARCH (R. E. Evenson & D. Gollin eds., 2003); ROBERT E. EVENSON & WALLACE E. HUFFMAN, SCIENCE FOR AGRICULTURE: A LONG TERM PERSPECTIVE (1993); Robert E. Evenson, *Agricultural Research and Intellectual Property Rights*, in INTERNATIONAL PUBLIC GOODS, *supra* note 24, at 188; MICHEL PETIT ET AL., WHY GOVERNMENTS CAN'T MAKE POLICY: THE CASE OF PLANT GENETIC RESOURCES IN THE INTERNATIONAL ARENA (2002); Neil D. Hamilton, *Who Owns Dinner: Evolving Mechanisms for Ownership of Plant Genetic Resources*, 28 TULSA L.J. 587 (1993).

²²³ Generally, economists define “public goods” as goods that are nonexcludable and nondepletable. See, e.g., ANDREU MAS-COLELL ET AL., MICROECONOMIC THEORY 359-60 (1995); JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 79-80 (3d ed. 2000). For Chon’s insightful discussion of the global public goods theory, see Chon, *supra* note 14, at 2863-69.

²²⁴ See generally CARY FOWLER, UNNATURAL SELECTION: TECHNOLOGY, POLITICS, AND PLANT EVOLUTION (1994) (describing how, in 1980s, countries of global South tried asserting that if their plant genetic resources were treated as open access or common heritage of humankind, so, too, should plant genetic resources of countries of global North); Peter Jaszi & Martha Woodmansee, *Beyond Authorship: Refiguring Rights in Traditional Culture and Bioknowledge*, in SCIENTIFIC AUTHORSHIP: CREDIT AND INTELLECTUAL PROPERTY IN SCIENCE 195 (Mario Biagioli & Peter Galison eds., 2003) (noting that paradigm of clearly individuated “inventor/genius” is inappropos when

applied to practices of farmers in terms of IP rights); KLOPPENBERG, *supra* note 8 (describing conflicts between global North and South over commodification of plant genetic resources that led to deadlock in late 1980s); VALUING LOCAL KNOWLEDGE: INDIGENOUS PEOPLE AND INTELLECTUAL PROPERTY RIGHTS (Stephen B. Brush & Doreen Stabinsky eds., 1996) (discussing difficulty, but necessity, of finding metric to value traditional knowledge and farmer know-how in terms of conserving plant genetic diversity, both in seed banks (*ex situ*) and in farmers' fields (*in situ*)); Keith Aoki, *Malthus, Mendel, and Monsanto: Intellectual Property and the Law and Politics of Global Food Supply: An Introduction*, 19 J. ENVTL L. & LITIG. 397 (2004) [hereinafter Aoki, *Malthus, Mendel, and Monsanto*] (describing how plant genetic resources as sovereign property gave rise to international treaty (ITPGR) that was promulgated in 2001 and went into force in 2004; treaty ratified treatment of plant genetic resources as sovereign property and contained annex listing 66 crops and forages that would be treated as exceptions to sovereign property regime); Keith Aoki, *Weeds, Seeds & Deeds: Recent Skirmishes in Seed Wars*, 11 CARDOZO J. INT'L & COMP. L. 247 (2003) (describing push and pull historically between treating plant genetic resources as national property, public domain resources, and more recently as IP); Stephen B. Brush, *Commentary, David A. Cleveland on Stephen C. Murray, The World's Crop Genetic Resources and the Rights of Indigenous Farmers*, 38 CURRENT ANTHROPOLOGY 497 (1997) (arguing that it is crucial to find ways to preserve *in situ* agricultural knowledge and practices of indigenous peoples and traditional farmers, and not focus solely on building up physical repositories of seed germplasm); Stephen B. Brush, *Indigenous Knowledge of Biological Resources and Intellectual Property Rights: The Role of Anthropology*, 95 AM. ANTHROPOLOGY 653 (1993) (arguing for importance of type of anthropological practice that seeks to conserve agricultural knowledge *in situ*); Jim Chen, *Webs of Life: Biodiversity Conservation as a Species of Information Policy*, 89 IOWA L. REV. 495 (2004) (arguing that biodiversity protection has some themes in common with IP; noting, however, that expanding IP scope may do more harm to biodiversity and suggesting that tax breaks and other measures may be more apropos); David A. Cleveland & Stephen Murray, *The World's Crop Genetic Resources and the Rights of Indigenous Farmers*, 38 CURRENT ANTHROPOLOGY 477 (1997) (arguing for importance of *in situ* conservation of agricultural crops and related know-how and knowledge); Graham Dutfield, African Centre for Technology Studies, *Indigenous Peoples, Bioprospecting and the TRIPS Agreement: Threats and Opportunities*, <http://www.acts.or.ke/prog/biodiversity/trips/dutfield.doc> (analyzing bioprospecting practices of major agro-chemical and life sciences companies called "Rifiling the Shaman's Bag") (last visited Jan. 31, 2007); Lara E. Ewens, *Seed Wars: Biotechnology, Intellectual Property and the Quest for High Yield Seeds*, 23 B.C. INT'L & COMP. L. REV. 285 (2000) (recounting history of agriculture and questioning wisdom of granting IP rights in seed germplasm, particularly in light of advancing transgenic technology); Michael Halewood, *Indigenous and Local Knowledge in International Law: A Preface to Sui Generis Intellectual Property Protection*, 44 MCGILL L.J. 953 (1999) (giving overview of legal treatment of traditional and indigenous knowledge as of 1999); Mark Hennig, *An Examination of the Possibility to Secure Intellectual Property Rights for Plant Genetic Resources Developed by Indigenous Peoples of the NAFTA States: Domestic Legislation Under the International Convention for Protection of New Plant Varieties*, 13 ARIZ. J. INT'L & COMP. L. 175 (1996) (focusing on legal treatment of indigenous and traditional knowledge in Central and North America, with hopeful focus in Mexico, but pessimistic in United States, even in light of legislation such as U.S. Native American Grave Repatriation Act ("NAGPRA")); Charles R. McManis, *The Interface*

An individual seed could be sold and owned, but the phenotypic and genotypic information it contained were not seen as ownable — that is, until plant scientists and geneticists began unlocking the secrets of the seed in the twentieth century.

A Breathtaking Reversal in Treatment of PGRs. Plant genetic resources (“PGRs”), or seed germplasm, underwent a breathtaking reversal in legal treatment from 1982 to 2001.²²⁵ Prior to 1982, “raw” seed germplasm was generally considered and legally regarded as the

Between International Intellectual Property and Environmental Protection: Biodiversity and Biotechnology, 76 WASH. U. L.Q. 255 (1998) (examining effects on conservation of plant genetic resources of turning those resources into valuable IP); Ikechi Mgbeoji, *Patents and Traditional Knowledge of the Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Biopiracy?*, 9 IND. J. GLOBAL LEGAL STUD. 163 (2001) (describing proposal for tribal community patents held in context of biopharmaceutical discoveries or uses of traditional or indigenous knowledge); John Ntambirweki, *Biotechnology and International Law Within the North-South Context*, 14 TRANSNAT'L LAW. 103 (2001) (criticizing asymmetries in location of biotechnological capacity to utilize bio-resources on North-South axis); Remigius N. Nwabueze, *Ethnopharmacology, Patents and the Politics of Plants' Genetic Resources*, 11 CARDOZO J. INT'L & COMP. L. 585 (2003) (criticizing manner in which IP laws of United States and Europe classify bio-resources of countries of South as “raw materials” to be turned into patented “property” in labs and patent offices of countries of North); James O. Odek, *Bio-Piracy: Creating Proprietary Rights in Plant Genetic Resources*, 2 J. INTELL. PROP. L. 141 (1993) (arguing that best way to fight bio-piracy is to create system wherein plant genetic resources of biodiverse regions are treated as type of IP with consent and compensation going to host countries); Angela R. Riley, *Recovering Collectivity: Group Rights to Intellectual Property in Indigenous Communities*, 18 CARDOZO ARTS & ENT. L.J. 175 (2000) (arguing that ideas such as communal patents that recognize group rights in culture and biological resources are workable and essential to conserving traditional and indigenous knowledge and practices in rapidly globalizing context); Naomi Roht-Arriaza, *Of Seeds and Shamans: The Appropriation of the Scientific and Technical Knowledge of Indigenous and Local Communities*, 17 MICH. J. INT'L L. 919 (1996) (criticizing expropriation of agricultural, cultural, and scientific knowledge by bioprospectors and ethnopharmacologists working for life sciences companies located in global North); Shayana Kadidal, Note, *Plants, Poverty, and Pharmaceutical Patents*, 103 YALE L.J. 223 (1993) (addressing question of why regions of world that are richest in terms of biodiversity are also regions of world that are economically poorest, and suggesting that finding means to compensate people in those regions via IP rights may be promising avenue); Lakshmi Sarma, Note, *Biopiracy: Twentieth Century Imperialism in the Form of International Agreements*, 13 TEMP. INT'L & COMP. L.J. 107 (1999) (examining treaties like TRIPS as embodying updated form of imperialism in context of expropriation of plant genetic resources).

²²⁵ See Aoki, *Malthus, Mendel, and Monsanto*, *supra* note 224, at 427-41 (providing detailed description on range of overlapping legal regimes directly affecting plant genetic resources). These legal regimes include the International Undertaking on Plant Genetic Resources (1983), Keystone Dialogues and “Farmers’ Rights,” the International Union for the Protection of New Varieties of Plants (1960, 1978, 1990), Convention on Biological Diversity (1992), TRIPS (1994), and ITPGR (2004).

“common heritage of mankind.”²²⁶ With some exceptions beginning in the 1930s, germplasm was something akin to an ocean seabed that is open to all and owned by none. As such, farmers, plant breeders, and agriculturalist scientists could freely access and use raw seed germplasm without qualification. Then, in 2001, the ITPGR was created.²²⁷ The ITPGR recognized germplasm as “sovereign property,” reaffirmed the commitment to farmers’ rights as protecting traditional knowledge relevant to PGRs, recognized a right to equitable benefit sharing, and granted the right to participate in decision-making at national levels on matters related to PGR use and conservation.²²⁸ What happened between 1982 and 2001 to create this momentous sea-change in the treatment of PGRs? Debates over the legal treatment of PGRs during this time have been called the “Seed Wars,” and this section provides an abbreviated history of the events surrounding the Seed Wars.

Massive Leaps in Twentieth Century Bio-Knowledge. The roots of the Seed Wars of the past two decades lie in the early twentieth century with the rediscovery of Gregor Mendel’s mid-nineteenth century work on plant genetics. Mendel’s discoveries provided twentieth century plant breeders a key to unlock the secrets of genetic heredity in plants.

²²⁶ The phrase “common heritage of mankind” was derived from Hugo Grotius and brought into contemporary usage by the Ambassador of Malta, Arvid Pardo, in an address on November 1, 1967, where he spoke of the deep sea-bed. Pardo articulated the points about the deep sea-bed as the “common heritage of mankind”: (1) the sea-bed and the ocean floor, underlying the seas beyond the limits of national jurisdiction as defined in the treaty, are not subject to national appropriation in any manner whatsoever; (2) the sea-bed and the ocean floor beyond the limits of national jurisdiction shall be reserved exclusively for peaceful purpose; (3) scientific research with regard to the deep seas and ocean floor not directly connected with defense shall be freely permissible and its result available to all; (4) the resources of the sea-bed and ocean floor, beyond the limit of national jurisdiction, shall be exploited primarily in the interests of mankind with particular regard to the needs of poor countries; and (5) the exploration and exploitation of the sea-bed and ocean floor beyond the limits of national jurisdiction shall be conducted in a manner consistent with the principles and purposes of the U.N. Charter and in a manner not causing obstruction of the high seas or serious impairment of the marine environment. See Address by Arvid Pardo, Ambassador, Malta, to the 22nd session of the General Assembly of the United Nations, U.N. GAOR, 22d Sess., 1516th mtg. at 2, U.N. Doc. A/C.1/PV.1516 (Nov. 1, 1967), available at http://www.un.org/Depts/los/convention_agreements/texts/pardo_ga1967.pdf; see also SUSAN J. BUCK, THE GLOBAL COMMONS: AN INTRODUCTION 28-29 (1998).

²²⁷ ITPGR, *supra* note 10.

²²⁸ Kirit K. Patel, *Farmers’ Rights over Plant Genetic Resources in the South: Challenges and Opportunities*, in INTELLECTUAL PROPERTY RIGHTS IN AGRICULTURAL BIOTECHNOLOGY 97 (F. H. Erbisch & K. M. Mareida eds., 2d ed. 2004).

By the 1920s, some public agricultural universities and private companies were experimenting with hybrid corn.²²⁹ By the end of the 1920s, Pioneer Hi-Bred began marketing higher yielding hybrid corn, and the division of research labor between the public and private sectors began to shift towards private seed companies that held, as trade secrets, the parent lines for hybrid corn.²³⁰

IP Protection for Plants. The second background trend leading up to the Seed Wars started when the United States began granting patent protection to asexually reproduced plants, such as grafts and clones, after the Plant Patent Act of 1930 (“PPA”).²³¹ At that time, Congress hesitated to grant patent protection to crop plants, which are sexually reproduced. In 1970, however, Congress enacted the Plant Variety Protection Act (“PVPA”), granting certified protection to plant breeders for sexually reproduced plants that were new and distinct, novel, and uniform and stable.²³² The PVPA included exemptions for farmer seed saving and limited “brown bag” sales of saved seed, which was eliminated in 1994. European nations began giving legal protection to plant breeders earlier than the United States via the International Union for the Protection of New Varieties of Plants (“UPOV,” 1960, 1978 and 1991).²³³

²²⁹ See KLOPPENBURG, *supra* note 8, at 105-16.

²³⁰ See *id.* at 235-36. See generally AGRICULTURAL RESEARCH POLICY IN AN ERA OF PRIVATIZATION (Derek Byerlee & Ruben G. Echeverria eds., 2002) (examining role of public agricultural research universities in period after 1980 Bayh-Dole Act mandated securing of any federally funded research by patents and downturn during same period of state support for such institutions and increasing private funding by corporations of research); ECONOMIC AND SOCIAL ISSUES IN AGRICULTURAL BIOTECHNOLOGY (R.E. Evenson et al. eds., 2002) (giving overview of issues facing public land grant colleges in context of IP rights, equity for indigenous people, and protection of traditional knowledge); INTELLECTUAL PROPERTY RIGHTS IN AGRICULTURAL BIOTECHNOLOGY (F.H. Erbisch & K.M. Maredia eds., 2d ed. 2004) (using international case studies to understand and describe ways that IP rights in biotech innovations have complicated field of agricultural research and plant improvement); SHELDON KRIMSKY, SCIENCE IN THE PRIVATE INTEREST: HAS THE LURE OF PROFITS CORRUPTED BIOMEDICAL RESEARCH? (2003) (noting same trend in biomedical and agricultural research at public universities and ways that it has undermined public research mission of those universities); JOSEPH HENRY VOGEL, GENES FOR SALE: PRIVATIZATION AS A CONSERVATION POLICY (1994) (describing ways that IP in biomedical and pharmaceutical areas has ironically created pressures for conservation of biodiversity).

²³¹ 35 U.S.C. §§ 161-164 (2006).

²³² 7 U.S.C. §§ 2321-2582 (2006).

²³³ International Convention for the Protection of New Varieties of Plants, Dec. 2, 1961, 33 U.S.T. 2703, 815 U.N.T.S. 89 [hereinafter UPOV]. “UPOV” is a French acronym for “Union Internationale pour la Protection des Obtentions Végétales.” For a discussion on the first plant breeders’ protection systems in Europe, the conflicts

The “Green Revolution” and Loss of Crop Genetic Diversity. The third converging trend was the growing criticism of the so-called “Green Revolution.”²³⁴ Agro-chemical corporations prospered, trumpeting industrial agriculture systems with the idea that “one seed would feed the world.” Rather than adapting seeds to different locales, the idea was to adapt diverse locales via heavy inputs to one seed. Yet, the social and environmental costs of high-input industrial agriculture became increasingly obvious in the United States, Europe, and the developing world. Books such as Rachel Carson’s *Silent Spring* made widely known the environmental damage arising from intense and expensive use of fertilizers, herbicides, and insecticides.²³⁵ The increase of industrialized agriculture drove small subsistence farmers off their land and into urban areas, in turn increasing the pressure on cash-strapped governments for necessary social services.²³⁶

between industry and plant breeders, the adoption of the UPOV, and the introduction of plant breeders’ rights in the United States, see ROBIN PISTORIUS & JEROEN VAN WIJK, *THE EXPLOITATION OF PLANT GENETIC INFORMATION: POLITICAL STRATEGIES IN CROP DEVELOPMENT* 79-85 (1999). The UPOV has been amended several times since 1961 when the original convention was finalized. These amendments include those of 1972, 1978, and 1991. Currently, different countries apply different versions of the UPOV convention as provided by the amendments. See Steven M. Ruby, Note, *The UPOV System of Protection: How to Bridge the Gap Between 1961 and 1991 in Regard to Breeders’ Rights*, 2 OKLA. J.L. & TECH. 19, 19 (2004). For a list of the 63 member nations (as of November 2006) and the respective versions of the UPOV the member nations currently apply, see Members of the International Union for the Protection of New Varieties of Plants, <http://www.upov.int/en/about/members/pdf/pub423.pdf> (last visited Nov. 28, 2006).

²³⁴ The fear that the world, especially the developing world, would not be able to feed its ever-increasing population led to the so-called “Green Revolution.” The Green Revolution inevitably caused the spread of modern agriculture worldwide. This new agriculture relied heavily on chemical inputs, machinery, technology, research and development networks, and state-supported investment. See Elizabeth Bowles, *Andhra Pradesh, India, as a Case Study in Perspectives on GMO’s*, 34 CUMB. L. REV. 415 (2004); see also CARY FOWLER & PAT R. MOONEY, *SHATTERING: FOOD, POLITICS, AND THE LOSS OF GENETIC DIVERSITY* 130-31 (1990) (stating that due to their reliance on chemical inputs and farm machinery, seeds developed as part of Green Revolution opened up world to agrichemical concerns). For a comprehensive discussion on the Green Revolution, see JACK DOYLE, *ALTERED HARVEST: AGRICULTURE, GENETICS, AND THE FATE OF THE WORLD’S FOOD SUPPLY* 255-81 (1985); PAT R. MOONEY, *SEEDS OF THE EARTH: A PUBLIC OR PRIVATE RESOURCE?* 37-46 (1979).

²³⁵ See generally RACHEL CARSON, *SILENT SPRING* (2002) (discussing dangers of indiscriminate use of pesticides).

²³⁶ For discussions on the social costs of development, see Denis Goulet & Charles K. Wilber, *The Human Dilemma of Development*, in *THE POLITICAL ECONOMY OF DEVELOPMENT AND UNDERDEVELOPMENT* 469 (Kenneth P. Jameson & Charles K. Wilber eds., 1996); Peter Gall, *What Really Matters — Human Development*, in *THE POLITICAL ECONOMY OF DEVELOPMENT AND UNDERDEVELOPMENT*, *supra*, at 530.

Meanwhile, critics of mass industrial agriculture who worried about the dangers of losing crop genetic diversity arising from widespread crop monocultures began organizing themselves.²³⁷ During the late 1970s, Canadian nongovernmental organization (“NGO”) Rural Advancement Foundation International and activist Pat Mooney took the lead in decrying crop monoculture practices and railing against the UPOV, the PVPA, and the PPA.²³⁸

U.S. Utility Patents in Living Organisms. The fourth and final prelude to the Seed Wars was the 1980 Supreme Court decision *Diamond v. Chakrabarty*.²³⁹ *Chakrabarty* held that U.S. utility patents could be obtained on living organisms that had been altered by human beings.²⁴⁰ In other words, inventive human agency via genetic manipulation could transform a living organism into something that could be patented. The U.S. Patent and Trademark Office (“PTO”) began granting utility patents to plants in 1985 with *Ex parte Hibberd*, starting with a variety of maize with high tryptophan levels.²⁴¹ Additionally, in 2001, in *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred International, Inc.*, the Supreme Court upheld the validity of utility patents in selectively bred plants.²⁴² While the U.S. legal system seems to have reached the firm conclusion that plants and their components are patentable IP, that legal conclusion remains controversial on an international level, notwithstanding agreements such as TRIPS.

First Shot in the Seed Wars. In 1982, two years after the landmark *Chakrabarty* decision, the first international legal shot was fired in the Seed Wars when the U.N. Food and Agriculture Organization (“FAO”) promulgated the International Undertaking on Plant Genetic Resources (“IUPGR”).²⁴³ The FAO had become a flashpoint for

²³⁷ See Aoki, *Malthus, Mendel, and Monsanto*, *supra* note 224, at 406.

²³⁸ See generally DOYLE, *supra* note 234; FOWLER & MOONEY, *supra* note 234; MOONEY, *supra* note 234 (decrying idea of patents in plants and arguing that only collective action by farmers and nations of global South could forestall disaster for plant genetic diversity). For a brief biography of Pat Mooney, see Action Group on Erosion, Technology, and Concentration (ETC Group), Pat Roy Mooney, Executive Director, http://www.etcgroup.org/en/about/staff/pat_mooney.html (last visited Nov. 28, 2006).

²³⁹ *Diamond v. Chakrabarty*, 447 U.S. 303, 305 (1980).

²⁴⁰ *Id.* at 313.

²⁴¹ See generally *Ex parte Hibberd*, 227 U.S.P.Q. (BNA) 443 (B.P.A.I. 1985) (expanding scope of what Patent and Trademark Office considers patentable subject matter from micro-organisms to genetically modified plants).

²⁴² *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.*, 534 U.S. 124, 127 (2001).

²⁴³ International Undertaking on Plant Genetic Resources, F.A.O. Res. 8/83, U.N. Doc. C/Res/8/83, (Nov. 23, 1983) [hereinafter IUPGR], *available at*

debates between the countries of the global North and the global South regarding PGR exploitation. Over the United States' objections, the FAO adopted the IUPGR in 1983 and established an FAO Commission on Plant Genetic Resources ("CPGR").²⁴⁴ The IUPGR and the CPGR were spearheaded by a group of developing countries and were supported by an array of NGOs allied with the International Coalition for Development Action.²⁴⁵

All PGRs as "Common Heritage of Mankind." The IUPGR was a nonbinding agreement that set out rules and standards for exchanging and conserving seeds and plant tissues. Importantly, the IUPGR took the position that PGRs were to be considered the "common heritage of mankind."²⁴⁶ Given that developed countries justified their access to and use of the genetic resources from developing countries of the South on that basis, why would this position be controversial? What made the IUPGR's "common heritage" principle so controversial was its extremely broad definition of PGRs subject to the IUPGR undertaking. Commercial plant varieties protected by breeders' rights and plant patents were to be treated in the same way as traditional landraces and wild plants — as "common heritage." Therefore, these commercial plant varieties would be freely accessible to farmers and breeders around the world.²⁴⁷

<ftp://ftp.fao.org/ag/cgrfa/Res/C8-83E.pdf>.

²⁴⁴ *Id.*; see also Graham Dutfield, *TRIPS-Related Aspects of Traditional Knowledge*, 33 CASE W. RES. J. INT'L L. 233, 265 (2001) ("At the 1981 FAO biennial conference, a resolution was adopted, against the vehement opposition of developed countries (especially the United States, United Kingdom and Australia) and the seed industry, calling for the drafting of a legal convention. In 1983, the over-ambitious demand for a convention was replaced by a call for a non-binding undertaking, and for the creation of a new FAO Commission on Plant Genetic Resources (CPGR) where governments could meet for discussion and monitor what became known as the International Undertaking on Plant Genetic Resources.").

²⁴⁵ NGOs such as the International Coalition for Development Action were more knowledgeable on the outstanding issues than were most of the delegates from the developing world. Thus, the delegates viewed these NGOs as resources that they could consult for analysis and information. Also, the NGOs played the important role of bridging the gap between Latin American delegates and their counterparts from Africa and Asia.

²⁴⁶ The principle of "common heritage" is embodied in the IUPGR. See IUPGR, *supra* note 243, at 1 ("Recognizing that (a) *plant genetic resources* are a *heritage of mankind* to be preserved, and to be freely available for use, for the benefit of present and future generations.") (emphasis added).

²⁴⁷ It is no surprise that such an arrangement was unacceptable to industrial nations, especially those with established private seed industries. These nations viewed the undertaking as a veiled attempt to undermine the principle of private property. They had good reason for concern since the undertaking literally sought to

Opposition to “Common Heritage.” Some countries, including the United States, flatly refused to participate in the IUPGR, resulting in a stalemate until 1989. Then, under the Keystone Dialogues, the developing and developed countries reached a preliminary agreement on three principles related to PGR. First, the parties came to a consensus that plants protected by plant variety protection rights would not be considered freely accessible — a recognition of valid IP rights in plant varieties.²⁴⁸ Second, the parties agreed that common heritage or free accessibility to farmers’ landraces and their wild and weedy relatives did not mean access free of charge. Instead, it might be possible to design an arrangement under which plant breeders could be obligated to pay for plant tissue and seeds collected in a particular country’s territory.²⁴⁹ Finally, the parties adverted to a vague idea of “farmers’ rights.”²⁵⁰ These rights were undefined, but the FAO referred to some sort of recognition for the thousands of years of farmers’ efforts spent in domesticating current agricultural staple crops and varieties.²⁵¹

The Idea of “Farmers’ Rights.” The idea of “farmers’ rights” was proposed in 1985 by the Rural Advancement Foundation International (“RAFI”), a Canadian NGO. The farmers’ rights platform was meant to embody concerns over genetic erosion and the North-South “gene

decommodify commercial plant varieties. See KLOPPENBURG, *supra* note 8, at 174; see also Jim Chen, *Webs of Life: Conservation as a Species of Information Policy*, 89 IOWA L. REV. 495, 583 (2004) (“The Food and Agriculture Organization of the United Nations . . . provides one example of an approach repudiating private property.”).

²⁴⁸ See THE KEYSTONE CTR., FINAL CONSENSUS REPORT OF THE KEYSTONE INTERNATIONAL DIALOGUE SERIES ON PLANT GENETIC RESOURCES: MADRAS PLENARY SESSION 24 (1990).

²⁴⁹ See Patel, *supra* note 228, at 97.

²⁵⁰ FOWLER, *supra* note 224, at 199 (“[I]mportant ground was broken in two areas — in defining the notion of genetic resources as ‘common heritage’ and in the emerging concept of ‘farmers’ rights.’”).

²⁵¹ FAO Resolution 5/89 states:

[Farmers’ rights are] rights arising from the past, present and future contribution of farmers in conserving, improving and making available plant genetic resources, particularly those in centres of origin/diversity. These rights are vested in the international community, as trustee for present and future generations of farmers, for the purpose of ensuring full benefits to farmers, and supporting the continuation of their contributions.

Carol B. Thompson, *International Law of the Sea/Seed: Public Domain Versus Private Commodity*, 44 NAT. RESOURCES J. 841, 863, 866 n.94 (2004). While the FAO formulated the concept of farmers’ rights, these rights were not defined in a legal sense because the term was considered political. *Id.*

drain.”²⁵² As envisaged by RAFI, farmers’ rights were a new type of collective IP right. These rights were meant to counter plant breeders’ rights and to allow farmers to receive compensation from an international genetic conservation fund to be administered by the FAO.²⁵³

New Rights? Farmers’ rights advocates focused on the following four issues: (1) the right to grow, improve, and market local varieties and their products; (2) the right to access improved plant varieties and use farm-saved seeds of commercial varieties for planting and exchange; (3) the right to be compensated for the use of local varieties in the development of new commercial products by outsiders; and (4) the right to participate in decision-making processes related to acquiring, improving, and using PGRs.²⁵⁴

Backing Off from Position That All PGRs Were “Common Heritage.” In 1989, the FAO adopted a new interpretation of the 1983 IUPGR that declared that plant breeders’ rights were compatible with common heritage. The FAO also recognized the principle of farmers’ rights and that most of the world’s valuable germplasm came from the developing world. This germplasm was the result of thousands of years of selection by farmers. Furthermore, the FAO recognized the idea that some form of compensation should be paid for use of that germplasm.²⁵⁵ However, neither the international fund nor farmers’

²⁵² See Susan K. Sell, *Post-TRIPS Developments: The Tension Between Commercial and Social Agendas in the Context of Intellectual Property*, 14 FLA. J. INT’L L. 193, 206 n.50 (2002).

²⁵³ Professor Laurence Helfer defines “farmers’ rights” as the following:

[Farmers’ rights is] a loosely defined concept that seeks to acknowledge the contributions that traditional farmers have made to the preservation and improvement of [plant genetic resources]. Unlike other natural resources such as coal and oil, [plant genetic resources] are maintained and managed by humans, who cultivate the wild plant varieties that serve as raw materials for future innovations by plant breeders. But whereas breeders obtain proprietary rights in new varieties to compensate them for the time and expense of innovation, no system of remuneration rewards farmers. Farmers’ rights thus act as a counterweight to plant breeders’ rights, compensating the upstream input providers who make downstream innovations possible.

Laurence R. Helfer, *Regime Shifting: The TRIPS Agreement and New Dynamics of International Intellectual Property Lawmaking*, 29 YALE J. INT’L L. 1, 37 (2004).

²⁵⁴ Patel, *supra* note 228, at 96.

²⁵⁵ Annie Patricia Kameri-Mbote & Philippe Cullet, *The Management of Genetic Resources: Developments in the 1997 Sessions of the Commission on Genetic Resources for Food and Agriculture*, 1997 COLO. J. INT’L ENVTL. L. & POL’Y 78, 83-84.

rights crystallized in the period following 1989, in large part because contributions to the fund were voluntary.

CBD and TRIPS. The ongoing debate over PGRs must be understood in the context of two multilateral agreements. The first is the Convention on Biological Diversity (“CBD”), adopted at the 1992 U.N. Conference on Environment and Development (a.k.a. the “Earth Summit”) in Rio de Janeiro, Brazil.²⁵⁶ The second is TRIPS, part of the General Agreement on Tariffs and Trade (“GATT”), which was finalized in 1992 in Marrakesh, Morocco.²⁵⁷ TRIPS was signed by 125 countries in 1994 and it mandates that PGRs be accorded plant variety protection, patent, or effective protection under a *sui generis* system.²⁵⁸ This meant that TRIPS contradicted the CBD²⁵⁹ and

²⁵⁶ Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 142 [hereinafter CBD]. The CBD’s objectives are “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.” *Id.* art. 1. The CBD “echoes the International Covenant on Economic, Social and Cultural Rights on the right to self-determination and on the balance of rights and duties inherent in the protection of intellectual property rights.” Intellectual Property Rights and Human Rights, Sub-Comm. on the Promotion and Prot. of Hum. Rts. Res. 2000/7, U.N. Doc. E/CN.4/Sub.2/Res/2000/7 (Aug. 17, 2000) [hereinafter Intellectual Property Rights], available at http://ap.ohchr.org/documents/E/subcom/resolutions/E-CN_4-Sub_2-Res-2000-7.doc.

The CBD imposes upon member states a duty to negotiate, and articulates dispute resolution guidelines in case of dispute over CBD interpretation or application. *See* CBD, *supra*, art. 27, paras. 1, 3. The CBD neither provides guidelines on conducting negotiations nor a third-party mediation (which it mandates in case of failed negotiations). *Id.* art. 27, para. 2. Arbitration or litigation with the International Court of Justice are remaining options if mediation fails. *Id.* art. 27, para. 3.

However, the CBD is limited in application to material “acquired . . . in accordance with this Convention” and in enforceability. The Bonn Guidelines on Access to Genetic Resources in 2002 provides a template for national laws and policies to effectuate CBD goals, yet these laws and policies are merely advisory to member states and are not binding.

²⁵⁷ TRIPS, *supra* note 17.

²⁵⁸ The UPOV regime is based on European plant variety protection (“PVP”) measures. While the UPOV seems to many to be an effective *sui generis* system, it does fall short in specific respects:

To meet the TRIPS standard, all species would have to be eligible for protection, and the rights guaranteed under law in one nation would have to extend not just to other members of UPOV, but to all countries under the World Trade Organization. The general UPOV approach, nevertheless, is certainly what parties to the TRIPS agreement had in mind for an acceptable *sui generis* alternative to patents. However, UPOV does not provide for protection of traditional farmer-varieties of crops, and thus cannot substantially help meet the goals of the Convention on Biological Diversity

weakened many gains the developing world made at the Earth Summit just two years earlier.²⁶⁰

. . . to ensure the conservation, sustainable utilization and fair and equitable sharing of benefits arising from the use of biological diversity.

Cary Fowler, *By Policy or Law? The Challenge of Determining the Status and Future of Agro-Biodiversity*, 3 J. TECH. L. & POL'Y 1, 36-37 (1997). In the United States, plant variety protection is provided by several means. Utility patent protection is geared toward biotechnological inventions, plant patent protection targets new and distinct asexually reproducible plant varieties, and sui generis protection (plant variety protection) is aimed at sexually reproduced plant varieties. McManis, *supra* note 224, at 275-76. The Supreme Court has previously ruled that both measures, i.e., utility patents and plant variety protection measures, do coexist. For a discussion on the options for sui generis protection, see GRAHAM DUTFIELD, *INTELLECTUAL PROPERTY RIGHTS, TRADE AND BIODIVERSITY* 78-85 (2000).

²⁵⁹ For discussion of the relationship between TRIPS and the CBD, see United Nations Environment Programme Conference of the Parties to the Convention on Biological Diversity, Buenos Aires, Arg., Oct. 5, 1996, *The Convention on Biological Diversity and the Agreement on Trade-Related Intellectual Property Rights (TRIPS): Relationships and Synergies*, U.N. Doc UNEP/CBD/COP/3/23; WTO Secretariat, *The Relationship Between the TRIPS Agreement and the Convention on Biological Diversity: Summary of Issues Raised and Points Made*, IP/C/W/368 (Aug. 8, 2002); see also *TRIPS Versus CBD: Conflicts Between the WTO Regime of Intellectual Property Rights and Sustainable Biodiversity Management, Global Trade and Biodiversity in Conflict*, BRIEFINGS (GRAIN, Barcelona, Spain), Apr. 1998, available at <http://www.grain.org/briefings/?id=24> (giving example of norm of legalization that is part of international regime governing plant genetic resources). This norm requires the pointing out of contradictions and gaps between instruments like the CBD and TRIPS, followed by the concomitant norm of seeking a way to rationalize or resolve those points of contradiction. The GRAIN website discusses various ways to solve contradictions between the CBD and TRIPS. See <http://www.grain.org> (last visited Jan. 27, 2007).

²⁶⁰ TRIPS has been construed as providing not only for international recognition, but also for the enforceability of private patents for microorganisms and even "life" itself. It should therefore come as no surprise that TRIPS has come under fire as legitimizing piracy of indigenous biodiversity-related knowledge from local communities in developing nations. U.N. resolutions, reports, and statements consider TRIPS to violate human rights vis-à-vis legitimizing biopiracy. See *Intellectual Property Rights*, *supra* note 256, para. 2 (declaring TRIPS implementation as failing to reflect "all human rights, including the right of everyone to enjoy the benefits of scientific progress . . . , the right to health, the right to food and the right to self-determination"); see also VANDANA SHIVA, *BIOPIRACY: THE PLUNDER OF NATURE AND KNOWLEDGE* 87-88 (1997); VANDANA SHIVA ET AL., *CORPORATE HIJACK OF BIODIVERSITY: HOW WTO-TRIPS RULES PROMOTE CORPORATE HIJACK OF PEOPLE'S BIODIVERSITY AND KNOWLEDGE* 29-30 (2002); Shalini Bhutani & Ashish Kothari, *The Biodiversity Rights of Developing Nations: A Perspective from India*, 32 GOLDEN GATE U. L. REV. 587, 591 (2002); Cynthia M. Ho, *Biopiracy and Beyond: A Consideration of Socio-Cultural Conflicts with Global Patent Policies*, 39 U. MICH. J.L. REFORM 433, 460-63 (2006).

In one view, the split between rich and poor nations has been characterized as "arrogant, cash-rich, resource-poor northern nations attempting to solidify their

CBD and PGRs. Although the CBD aimed to conserve biodiversity, it carries direct implications on the issue of IP rights in PGRs. The CBD was a multilateral agreement resulting from a process that arose out of environmental concerns in the Organization for Economic Cooperation and Development (“OECD”) member countries.²⁶¹ The CBD took the position that economic incentives are necessary in order to encourage developing countries to conserve their biodiversity and abjure quick gains through activities such as deforestation and cash crops, both of which result in the destruction of biodiversity.²⁶² While

economic position at the expense of naive, cash-poor, resource-rich southern nations.” Scott Holwick, *Developing Nations and the Agreement on Trade-Related Aspects of Intellectual Property Rights*, 1999 COLO. J. INT’L ENVTL. L. & POL’Y 49, 53-54 (2000). The signing of the CBD was intended to mend this rift, but the United States’ refusal to join in the final agreement caused concern in the South. India, acting on behalf of the developing nations, squared off against the developed nations at a WTO meeting to plan the Seattle meeting agenda. *Id.* The two sides were unable to reach consensus on any outstanding issues, including reconciliation of TRIPS with the CBD. *Id.* As a result, many developing nations traveled to the Seattle WTO meeting ready to disavow their previous TRIPS commitments and force renegotiation of the entire TRIPS agreement. *Id.* See generally Ruth L. Gana, *Prospects for Developing Countries Under the TRIPS Agreement*, 29 VAND. J. TRANSNAT’L L. 735, 736-41 (1996) (analyzing relationship between TRIPS agreement and developing nations); Evelyn Su, *The Winners and the Losers: The Agreement on Trade-Related Aspects of Intellectual Property Rights and Its Effects on Developing Countries*, 23 HOUS. J. INT’L L. 169, 170-72 (2000) (providing analysis of TRIPS and its implications for developed and developing nations).

Some NGOs have urged cessation of subsequent “TRIPS-plus” standards in bilateral agreements and called for moratoria on development of further international patent norms. See Ho, *supra*, at 511 (calling TRIPS-plus standards “[a] serious incursion on the national sovereignty of developing countries,” due to “enormous pressure and incentive to cooperate with countries that have not only lucrative export markets, but also power to control their credit”).

²⁶¹ For background on this convention, see Amanda Hubbard, Comment, *The Convention on Biological Diversity’s Fifth Anniversary: A General Overview of the Convention — Where Has It Been and Where Is It Going?*, 10 TUL. ENVTL. L.J. 415 (1997) (commenting on early impact of CBD).

²⁶² Under the CBD, developing countries rich in biodiversity agreed to conserve their biodiversity in return for financial aid and royalties from companies that pay to access, use, and exploit these resources. This provided developing nations with incentives to safeguard their biodiversity and, in the process, protect against short-term ventures likely to involve rapid deforestation and subsequent species destruction and other environmentally adverse consequences. See McManis, *supra* note 224, at 260 (1998). This system was created out of recognition that most developing nations would be unable to pay for the measures called for in the CBD without adequate compensation. However, many activists favored a stronger legal framework to protect genetic diversity in the CBD, which they viewed as far from perfect. See Raneer K.L. Panjabi, *Idealism and Self-Interest in International Environmental Law: The Rio Dilemma*, 23 CAL. W. INT’L L.J. 177, 191 (1992). Furthermore, an element of historical

the CBD did not focus on PGRs for food and agriculture, it addressed general concerns relating to the conservation of all plants and other organisms in the global ecology. Many of the same divisions and controversies that surfaced in the FAO debates over the IUPGR also appeared in the CBD negotiations. Some of these concerns were the international North-South divide over distribution of the benefits of biological organisms, the propriety of granting IP rights over living organisms, and technology transfer questions regarding access to technologies necessary to utilize the benefits of such biological organisms.²⁶³

PGRs as Sovereign National Property. The CBD differed in one key respect from the IUPGR in that the CBD acknowledged that many nations had already granted IP protection of biotechnological inventions. Additionally, and contrary to the IUPGR, the CBD did not take a common heritage approach to biological resources but applied the notion that the “countries of origin” of biological resources exercised sovereignty over plants, animals, and microorganisms within their national boundaries.²⁶⁴ With PGR characterized as a species of

justice has been proposed — namely, that while the developed world industrialized and subsequently ensured higher standards of living for its citizenry, the same developments led to the destruction of biodiversity in the developing world. See Catherine J. Tinker, *Introduction to Biological Diversity: Law, Institutions, and Science*, 1 BUFF. J. INT'L L. 1, 21 (1994).

²⁶³ The United States' refusal to ratify the CBD came as no surprise to many people as the United States repeatedly voiced substantive objections to the CBD. First, the United States took issue with the CBD's requirement that developed countries fund environmentally conscious development in developing countries. The United States specifically was uncomfortable with what it perceived as a lack of definite restrictions on the amount of funds developed nations could be forced to contribute to developing nations. Second, the CBD called for essentially open technology transfer including biotechnology. The United States perceived this provision as endangering IP rights because the treaty mandated transfer of not only publicly owned but also privately owned technology. Finally, the United States objected to the CBD's call for regulatory measures that applied only to biotechnology as opposed to other environmentally harmful and diversity-depleting activities. See George Van Cleve, *Regulating Environmental and Safety Hazards of Agricultural Biotechnology for a Sustainable World*, 9 WASH. U. J.L. & POL'Y 245, 252 n.16 (2002). While the first Bush Administration articulated these arguments, large and influential American corporations repeatedly expressed the same concerns that ratifying the CBD would adversely affect American interests. However, the United States became a signatory under the Clinton Administration. David B. Vogt, *Protecting Indigenous Knowledge in Latin America*, 3 OR. REV. INT'L L. 12, 19 n.57 (2001).

²⁶⁴ The CBD treats genetic resources as “tradable commodities subject to national sovereignty rights” and whose transfer from the developing to the developed world was envisioned to entail a transfer of technology among other benefits. Dutfield, *supra* note 244, at 260; cf. IUPGR, *supra* note 243, Annex I (setting forth list of crops

sovereign national property,²⁶⁵ the CBD posited that this sovereign property was a basis for informed consent (prior to extraction and exploitation) and benefit sharing.²⁶⁶

TRIPS and the Issue of Global Protection for Bio-Knowledge Products. In 1986, the initial focus of the Uruguay Round, and specifically TRIPS, was an attempt by industrialized nations to secure multilateral protection for new technologies, pharmaceuticals, and copyrighted media works against unauthorized imitation or duplication.²⁶⁷ However, by 1990, IP protection for biological organisms, including plants, had emerged as a major negotiating point, just as several, newly patented biotech inventions began appearing on the market.²⁶⁸ At the same time, the phenomenal spate of mergers and acquisitions in the chemical and pharmaceutical economic sectors that began in the 1970s continued, with these companies swiftly moving into the areas of genetically engineered plants, plant breeding, and crop development.²⁶⁹ Companies also aggressively acted to secure some

covered under Multilateral System).

²⁶⁵ CBD, *supra* note 256, art. 3 (“States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”).

²⁶⁶ *Id.* art. 15.5 (requiring prior informed consent of party “owning” natural resource); *id.* art. 8(j) (examining equitable sharing of benefits). Additionally, the CBD recognized the rights of subnational groups such as indigenous and local communities to participate in “benefit sharing.” For more on traditional resource knowledge and resources, and indigenous heritage, see generally DUTFIELD, *supra* note 258; INDIGENOUS HERITAGE AND INTELLECTUAL PROPERTY (Silke von Lewinski ed., 2004).

²⁶⁷ See TRIPS, *supra* note 17; Andrew T. Guzman, *International Antitrust and the WTO: The Lesson from Intellectual Property*, 43 VA. J. INT’L L. 933, 950 (2003) (“[T]he agreement seeks to prevent developing countries from allowing what in developed countries would be viewed as violations of intellectual property rights.”).

²⁶⁸ The various states differed with regard to how to deal with IP in genetically engineered products. These discussions formed part of the negotiations that led to the 1994 Uruguay Round agreements on trade. The language that emerged from these negotiations failed to address the treatment of genetically engineered products and inevitably left many other questions unanswered. See Sean D. Murphy, *Biotechnology and International Law*, 42 HARV. INT’L L.J. 47, 67-68 (2001).

²⁶⁹ Jack R. Kloppenburg & Daniel L. Kleinman, *Preface, Plant Genetic Resources: The Common Bowl*, in SEEDS AND SOVEREIGNTY: THE USE AND CONTROL OF PLANT GENETIC RESOURCES 1, 9 (Jack Kloppenburg ed., 1988). In *Oligopoly, Inc. 2005*, ETC Group (formerly known as NGO RAFI) revisited the sectors analyzed in *Oligopoly, Inc. 2003* and found that corporate concentration — not only in food in agriculture, but in all sectors related to the products and processes of life — increased remarkably

form of global IP protection for their biotech innovations.²⁷⁰ Claims for more expansive IP protection were met with opposition from some developing countries against strengthening international patent law. These countries advocated excluding plant or animal varieties from patent, if required on particular public interest grounds.²⁷¹

since the last review two years ago. Since then, the world's top 10 seed companies have increased their control from one-third to one-half of the global seed trade; the top 10 biotech enterprises have raised their share from just over half to nearly three-quarters of world biotech sales; the market share of the top 10 pesticide manufacturers rose modestly, from 80% to 84%, but industry analysts predict that only three companies will survive the next decade; and the top 10 pharmaceutical companies control almost 59% market share of the world's leading 98 drug firms (previously the top 10 accounted for 53% market share of 118 companies). Hope Shand, ETC Group's research director, observes:

It comes as no surprise that corporate concentration has increased dramatically since ETC Group's *Oligopoly, Inc. 2003* report. The trend line is distressing and the predictions of new mergers and greater concentration are alarming. What we are witnessing is ever more concentrated control over every aspect of life.

Press Release, ETC Group, ETC Group Releases New Report on Corporate Power (Dec. 16, 2005), available at <http://www.etcgroup.org/upload/publication/42/01/finalnroligopoly2005.pdf>. Other observers note that U.S. regulatory changes served as a catalyst for the recent spate of mergers resulting in corporate realignment. However, this trend is not unique to the United States as there have been massive mergers within the chemical and life sciences industries. For example, Novartis AG is one of the largest pharmaceutical companies and a global leader in crop protection chemicals. Novartis is the result of a \$27 billion merger in 1996 between two Swiss corporations, Ciba-Geigy SA and Sandoz Ltd. The consummation of this merger increased the stakes in the biotechnology industry and led to even more mergers and strategic alliances between large multinationals and smaller biotechnology companies. See Stevan M. Pepa, *Research and Trade in Genetics: How Countries Should Structure for the Future*, 17 MED. & L. 437, 441 (1998).

²⁷⁰ See generally Debora Halbert, *Intellectual Property in the Year 2025*, 49 J. COPYRIGHT SOC'Y U.S.A. 225, 242 (2001) (discussing how IP is key component to globalized world). IP law is the key component of the globalized world, allowing corporations to enforce their property rights under international law. TRIPS was the product of a lobbying effort of 12 American multinational corporations. By successfully equating IP rights with trade, these companies ensured they would remain firmly entrenched as players in the global future. *Id.* (citation omitted).

²⁷¹ TRIPS, *supra* note 17, art. 27(2) (stating that inventions are excludable from patentability if deemed threat to public order). "[WTO m]embers shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof." *Id.* art. 27(3)(b); see Susan Bragdon & David Downes, *Recent Policy Trends and Developments Related to the Conservation, Use and Development of Genetic Resources*, ISSUES IN GENETIC RESOURCES, (Int'l Plant Genetic Resources Inst., Rome, Italy), June 1998, at 10. Articles 27(2)-(3) of TRIPS, which discusses the order public morality clause, state:

Raustialia's and Helfer's Regime-Complex for PGRs. It is useful to compare the different fora: the U.N.-sponsored IUPGR and 1992 Earth Summit (which produced the CBD), the IP-forum UPOV, the CGIAR system (funded by the industrialized world), and the trade forum GATT which produced TRIPS.²⁷² The 1989 and 1991 changes in the IUPGR (which ultimately became the 2004 ITPGR) benefited the developing world, whereas the 1991 revisions to UPOV strengthened the position of private plant breeders.²⁷³ The CBD represented some important gains for the developing world recognizing the national sovereignty principle,²⁷⁴ and obliging corporations to use developing countries' seed germplasm to pay royalties and transfer technology to the host countries.²⁷⁵ Also, under

2. Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by [domestic] law.

3. Members may also exclude from patentability:

(a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals;

(b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

TRIPS, *supra* note 17, arts. 27(2)-(3).

²⁷² See, e.g., Kal Raustiala & David G. Victor, *The Regime Complex for Plant Genetic Resources* (UCLA Sch. of Research Paper Series, Int'l Org., Research Paper No. 03-19, 2004), available at <http://ssrn.com/abstract=441463>; see Helfer, *supra* note 253.

²⁷³ The ITPGR goes beyond recognizing farmers' rights; one of its main aims is to facilitate the exchange of seeds and other plant materials for research, breeding, and crop development purposes. It seeks to accomplish this exchange by creating a multilateral system to which member states and their nationals are granted "facilitated access." Helfer, *supra* note 253, at 40. In contrast, the UPOV aims to protect breeders' rights and creates an obligation for the respective signatory states to enact legislation to further that goal. In effect, the UPOV sought to harmonize property rights associated with the creation or selective breeding of plant varieties. Eric B. Bluemel, *Substance Without Process: Analyzing TRIPS Participatory Guarantees in Light of Protected Indigenous Rights*, 86 J. PAT. & TRADEMARK OFF. SOC'Y 671, 695-96 (2004).

²⁷⁴ CBD, *supra* note 256, at 822.

²⁷⁵ The CBD language is framed in terms of an "equitable sharing" of benefits

article 19 of the CBD, developing countries have priority access to biotech products developed from their germplasm.²⁷⁶ Moreover, the CBD also links IP rights to the distribution of benefits of biotechnology; stating that IP rights should not run counter to the objectives of the CBD, one of which is “the fair and equitable sharing of the benefits of genetic resources.”²⁷⁷

Failed Farmers’ Right Fund? Although the FAO’s 1983 IUPGR was non-binding, an FAO resolution in 1989 recognized farmers’ rights and proposed “establishing a mandatory international fund to support conservation and utilization of [PGR] through various [programs] particularly, but not exclusively, in the Third World.”²⁷⁸ This fund

resulting from the exploitation of traditional knowledge between developed and developing nations. The convention further promotes broader participation in scientific research, the exchange of information among the various member signatory states, the facilitation of both public and private sector technology transfer, and equitable sharing of scientific research results and the benefits of genetic resource commercialization. Wesley A. Cann, Jr., *On the Relationship Between Intellectual Property Rights and the Need of Less-Developed Countries for Access to Pharmaceuticals: Creating a Legal Duty to Supply Under a Theory of Progressive Global Constitutionalism*, 25 U. PA. J. INT’L ECON. L. 755, 925 (2004). Therefore, the CBD creates a legal basis for the developed signatory states to bargain with the developing signatories should they require access to traditional knowledge for commercial development, with royalties or other remuneration envisioned as the results of such bargaining. These financial considerations are then, in turn, to be distributed to the community as proceeds arising from its commonly held traditional knowledge. See Shubha Ghosh, *Traditional Knowledge, Patents, and the New Mercantilism (Part II)*, 85 J. PAT. & TRADEMARK OFF. SOC’Y 885, 921 (2003).

²⁷⁶ See CBD, *supra* note 256, art. 19(2). The CBD states:

Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms.

Id.

²⁷⁷ *Id.* art. 1.

²⁷⁸ Patel, *supra* note 228, at 97 (citing THE KEYSTONE CENTER, *supra* note 248). As applied to PGRs, the IUPGR was viewed as conflicting with the UPOV, which favored plant breeders’ rights when it came to cultivated plant varieties. However, proponent states lobbied successfully to revise the IUPGR, stating that plant breeders’ rights were “not incompatible” with the principles underlying the IUPGR. As a result of this reconciliation, the developed states had unrestricted access to unimproved PGRs without the benefit of compensation flowing to the states, communities, or institutions that maintained them. To address this imbalance, the developing states proposed that the revised IUPGR vest farmers’ rights in the international community as trustees. A vital component of this arrangement was the creation of an international fund to support conservation. However, FAO members failed to

was implemented in the 1990s, and as a result, the FAO decided to institute farmers' rights through a Global Plan of Action adopted at Leipzig in 1996.²⁷⁹ However, the Global Plan of Action similarly lacked sufficient funding.²⁸⁰

The 1981 IUPGR's Failure and the 2001 ITPGR's "Success." In 1994, the FAO initiated an intergovernmental round of negotiations meant to revise the 1983 IUPGR in order to make it legally binding, and harmonize its provisions with the 1992 CBD that were at odds with the 1983 IUPGR's broad definition of "common heritage" (as the CBD stressed the notion of PGR as "sovereign property"). In November 2001, 116 member nations (including the United States) signed a new agreement, the ITPGR.²⁸¹ The ITPGR reaffirms the commitment to farmers' rights.²⁸² Namely, it recognizes protections of traditional

contribute in any meaningful way, causing the fund to languish during the 1980s and 1990s. Heller, *supra* note 253, at 36-37.

²⁷⁹ See David S. Tilford, *Saving the Blueprints: The International Legal Regime for Plant Resources*, 30 CASE W. RES. J. INT'L L. 373, 426-27 (1998). The creation of an international fund in support of farmers' rights was a controversial proposition at the FAO-sponsored Fourth Technical Conference on Plant Genetic Resources (Leipzig, Germany, June 1996). Prior to the conference, 154 governments submitted country reports to the FAO. These reports assessed the status of PGR conservation within their respective jurisdictions and served as the basis for the FAO *Report on the State of the World's Plant Genetic Resources*. Drawing on this report, delegates from 150 countries converged in Leipzig and agreed upon the Global Plan of Action ("GPA").

²⁸⁰ ITPGR, *supra* note 10, art.14. Article 14 expressly acknowledges the Global Plan of Action:

Recognizing that the rolling Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture is important to this Treaty, Contracting Parties *should promote* its effective implementation, including through national actions and, *as appropriate*, international cooperation to provide a coherent framework, inter alia, for capacity-building, technology transfer and exchange of information, taking into account the provisions of Article 13.

Id. (emphasis added).

It is not surprising that the GPA would suffer the same fate as the revised IUPGR when it comes to the reluctance of FAO to fund it. The language in article 14 is framed in soft terms including "should promote" when referring to effective implementation and "as appropriate" when talking about international cooperation. Such language has led to the impression that national action is discretionary rather than mandatory. See Gregory Rose, *International Law of Sustainable Agriculture in the 21st Century: The International Treaty on Plant Genetic Resources for Food and Agriculture*, 15 GEO. INT'L ENVTL. L. REV. 583, 592 (2003).

²⁸¹ See Kelly Day-Rubenstein & Paul Heisey, *Plant Genetic Resources*, AMBER WAVES, June 2003, at 22.

²⁸² *Id.*

knowledge relevant to PGRs, a right to equitable benefit sharing, and participation in national level decision making on PGR use and conservation issues.²⁸³ The ITPGR sought to achieve farmers' rights by exchanging information,²⁸⁴ facilitating technology transfer and capacity building,²⁸⁵ and sharing the benefits (monetary and non-monetary) of PGR commercialization.²⁸⁶ However, the ITPGR also allowed the most important issue with regard to farmers' rights — the rights to use, exchange, and sell farm-saved seeds of traditional as well as improved varieties — to remain within the sole discretion of national governments.²⁸⁷

ITPGR: Banked Seed Germplasm as a "Limited Commons" with a Gigantic Loophole. The ITPGR addresses IP rights in PGRs by proposing the creation of a Multilateral System ("MLS").²⁸⁸ Under the MLS, a recipient of MLS-provided germplasm²⁸⁹ received through the MLS (i.e., from one of the international seed banks) "shall not claim any intellectual property or other rights" that limit access to PGR "in the form received from the [MLS]."²⁹⁰ This means that seed germplasm in the original form received from a seedbank cannot be protected by IP rights; however, any individual genes, advanced lines, cells, particular DNA sequences, and compounds derived from such germplasm may be protected. Because the ITPGR does not recognize any rights in individual farmers or breeders who develop new plant varieties through systemic practices, the "in the form received" language works to substantially undermine the ITPGR's farmers' rights

²⁸³ Patel, *supra* note 228, at 97.

²⁸⁴ ITPGR, *supra* note 10, art. 13.2(a).

²⁸⁵ *Id.* arts. 13.2(b)-(c); *cf.* TRIPS, *supra* note 17, art. 66 (mandating that developed countries provide incentives for businesses to promote and encourage technology transfer to poorer nations). For a discussion on technology transfer after the TRIPS agreement, see Keith E. Maskus & Jerome H. Reichman, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, 7 J. INT'L ECON. L. 279, 287-91 (2004).

²⁸⁶ ITPGR, *supra* note 10, art. 13.2(d). However, for an assessment of the adverse impact from diffusion of commodified PGRs on the peasant sectors of less developed countries, see Stephen B. Brush, *Genetically Modified Organisms in Peasant Farming: Social Impact and Equity*, 9 IND. J. GLOBAL LEGAL STUD. 135, 141-46 (2001).

²⁸⁷ ITPGR, *supra* note 10, art. 9.3 (stating that "[n]othing in this Article shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed/propagating material, *subject to national law and as appropriate*") (emphasis added).

²⁸⁸ *Id.* arts. 10, 13.

²⁸⁹ See *id.* Annex I ("List of Crops Covered under the Multilateral System").

²⁹⁰ *Id.* art. 12.3(d).

provisions.²⁹¹ However, institutional public and private plant breeders continue to enjoy protection.²⁹² Furthermore, while the ITPGR is more comprehensive in its treatment of farmers' rights, it does little to offer effective implementation or vindication of those rights.²⁹³

Multilateral Approaches vs. Bilateral Agreements-Bioprospecting. With respect to PGRs, two models emerged during the Seed Wars: a multilateral approach concerned with creating international institutions to address PGR transfer issues embodied by the FAO's ITPGR, and an approach focused on bilateral market transactions consistent with with the CBD's articles 15²⁹⁴ and 16.²⁹⁵ The second model is epitomized by Merck's contractual arrangements with Costa Rica's InBio, whereby Merck received access to a Costa Rican biological preserve for \$1.13 million plus an undisclosed share of future royalties.²⁹⁶ Both models problematically characterize indigenous knowledge of PGRs and traditional farmer know-how as a type of IP.

²⁹¹ Patel, *supra* note 228, at 98.

²⁹² See, e.g., Thomas Cottier & Marion Panizzon, *Legal Perspectives on Traditional Knowledge: The Case for Intellectual Property Protection*, 7 J. INT'L ECON. L. 371, 377-78 (2004). ITPGR article 12.3 is opposed to the extension of IP rights to traditional knowledge and on PGRs used for food or agriculture. However, the ITPGR permitted plant breeders who utilized genetic materials from the CGIAR gene banks to obtain proprietary rights. Articles 12.3(f) and (g) do not preclude private plant breeders or public institutions from claiming IP rights on modifications of plant genetic materials; once protection is extended, only the patent holder can release control over it.

²⁹³ While ITPGR article 9.2 recognizes the concept of farmers' rights with regards to plant genetic resources for food and agriculture, it places the primary responsibility of its realization on national governments. The ITPGR only calls for each signatory nation to enact legislation to protect farmers' rights in the areas of (1) protection of traditional knowledge, (2) the right to equitable participation, and (3) the right to participate in decision-making. Although article 9.3 preserves the right for farmers to save, use, exchange, or sell farm-saved seed or propagating material, this right is subject to local legislation.

²⁹⁴ CBD, *supra* note 256, art. 15 ("[S]haring in a fair and equitable way the results of research and development.").

²⁹⁵ *Id.* art. 16 (concerning "access to and transfer of technology . . . under fair and most favorable terms").

²⁹⁶ See Silvia Rodriguez & Maia Antnieta Camacho, *Bioprospecting in Costa Rica: Facing New Dimensions of Social and Environmental Responsibility*, in THE GREENING OF BUSINESS IN DEVELOPING COUNTRIES: RHETORIC, REALITY AND PROSPECTS (Petter Uttin ed., 1992); cf. Edgar J. Asebey & Jill D. Kempenaar, *The Intellectual Property Perspective on Biodiversity: Biodiversity Prospecting Fulfilling the Mandate of the Biodiversity Convention*, 28 VAND. J. TRANSNAT'L L. 703, 725-30 (1995); Tom Dedeurwaerdere, *Bioprospecting: From the Economics of Contracts to Reflexive Governance* (BIOECON Network, Working Paper No. 56, 2004), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=541108.

Difficulties with a Bilateral Agreement-Bioprospecting Model. The bilateral transactions/bioprospecting model contemplates contracts for PGR commercialization but does not necessarily provide for PGR conservation. There are three major drawbacks to this approach: (1) the problem of price-setting due to the difficulty of establishing prospective value of a genetic resource at the point of collection; (2) some plant genetic traits may be economically worthless in the present but could become valuable at some uncertain point in the future, and vice versa; and (3) the IP laws of countries like the United States were not designed for recognizing, let alone compensating, the types of collective, intertemporal, and anonymous innovations that PGRs (i.e., peasant farmers' landraces) represent. To the extent that this model is consistent with the CBD, obtaining *meaningful* "informed consent" is complicated by the fact that communities from whom consent is sought are not homogenous and stable but are often fragmented, with compositions that are dynamic over time.

Flaws in the Multilateral Model. Similarly, the ITPGR model also contains several flaws. First, while the ITPGR contemplates a "multilateral system of access and benefit sharing," it pays mere lip service to the idea of farmers' rights. Article 9 articulates three categories of farmers' rights that are so vague they are diaphanous. Second, the ITPGR states that farmers' rights are "subject to national legislation" and that the responsibility for implementing those rights "rests with national governments."²⁹⁷ What does this mean for a country like the United States, which in 1994 amended the PVPA to significantly cut back the farmers' seed saving exemption? Third, while the ITPGR ostensibly creates a mechanism for sharing the benefits of commercialization, the form and manner of payment are not delineated and are thus reminiscent of the hollow FAO International Undertaking gene conservation fund. Fourth, as mentioned above, PGRs stored in gene and seed banks within the MLS have virtually no insulation from being converted into patented property. The weakness here is that the seed banks only stipulate that people receiving material from the banks are prohibited from obtaining IP rights in the material, but only "in the form received."²⁹⁸ This means that subsequent transformations via breeding or genetic engineering could be patentable. Finally, article 13 states: "Benefits should flow primarily, directly and indirectly, to farmers."²⁹⁹

²⁹⁷ ITPGR, *supra* note 10, art. 9.2.

²⁹⁸ *Id.* art. 12.3(d)

²⁹⁹ *Id.* art. 13.

However, farmers do not in fact receive direct financial benefits. Benefits to farmers accrue indirectly through “trickle down” information exchange, technology transfer, and capacity-building via the scientific community. Despite these distinct flaws, the MLS at least provides a counterbalance to market-based bilateral transactions and allows the genetic materials in the CGIAR gene banks to exist unambiguously in the public domain under control of an intergovernmental body. Still, the ITPGR’s MLS was premised on *all* crops, *not* on the Annex being “sovereign national property” that invites bilateral transactions.

Is Common Heritage Treatment for PGRs Dead as of 2006? Common heritage treatment exists for sixty-four crops and forages on the ITPGR Annex³⁰⁰ and the genetic materials in the CGIAR seed banks in the form received, but sovereign ownership seems to be the model for all other PGRs. There is a profound lack of consensus concerning the question of IP in such materials, which in turn undermines PGR collection and transfer. This lack of consensus relates to perceptions of the increased economic value of PGRs and fears of the theft of such resources. Indeed, the metaphor of (sovereign) property may be used by particular countries to block the characterization of PGRs as IP. For example, Ethiopia stopped exporting its wild coffee germplasm.³⁰¹ Meanwhile, Peru’s National Institute for Natural Resources and the National Institute for Agricultural Resources allow plant collectors to collect only authorized materials, prohibit collection from local communities, and use Material Transfer Agreements to contractually prevent collectors from seeking or obtaining IP on material without their permission.³⁰²

Winners and Losers (Again): An Anti-Commons for Seed Germplasm Collection and Exchange. The breakdown of the common heritage system via the CBD and subsequent hampering of seed germplasm collection and exchange may even be viewed as a Hellerian “anti-commons.” Neoliberal encouragement of the use of the ideas of “sovereign property” coupled with the use of bilateral contracts and transactions after the CBD created a situation in which “multiple

³⁰⁰ See ITPGR, *supra* note 10 (Annex I includes 35 crops and 29 forages).

³⁰¹ *Id.*

³⁰² See, e.g., STEPHEN BRUSH, FARMERS’ BOUNTY: LOCATING CROP DIVERSITY IN THE CONTEMPORARY WORLD (2004) (discussing influences that indigenous farming practices and national policy efforts in global South, plus certain scientific interventions and economic factors (e.g., consumer tastes, supply-and-demand around harvest cycles) have had in preserving and increasing some forms of plant genetic diversity in food supply).

owners each have the right to exclude others from a scarce resource and no one has an effective privilege of use.”³⁰³ This situation privileges private parties and entities that “own” or contract to “own” elite breeding lines, gene fragments, genes themselves, and genotypes via trade secrets law, certified UPOV varieties, or utility patents. The CBD privileges national sovereigns and regional blocs such as the Andean Pact nations, and the “sovereign property” idea is enshrined by the 2001 ITPGR, notwithstanding the sixty-four crops and forages in the Annex.³⁰⁴ This raises the all-important distributive question: who benefits and who suffers from the slowdown in PGR exchange under the sovereign property regime?

Hurting the Ones You’re Trying to Help. Ironically, the PGR slowdown hurts the poorest countries the most, as the Least Developed Countries are net importers of seed germplasm. Even though they may originally have been the sources of seeds in seed banks, they now depend on access to seed banks in the industrial nations. Conversely, while the United States has been characterized as “gene poor” because of its extensive seed collections, it provides seed germplasm to supposedly “gene rich” countries.³⁰⁵ Stephen Brush writes that “of the 6,159,248 accessions inventoried among all gene banks in 1996, slightly more than half (3,447,469) were held by gene banks in Europe, North America, Japan and international agricultural research centers of [CGIAR].”³⁰⁶ Consequently, a “large portion of the total diversity of the world’s major crops has been captured and stored in gene banks of major industrial countries and agricultural research centers.”³⁰⁷

Bio-Linux? It is in this context that Chon’s call for introduction of a “substantive equality principle” is most timely, particularly when dealing with a global public good such as agriculture and food supply.³⁰⁸ Indeed, the emphasis from the 1990s onward has shifted to bilateral contracts with “informed consent” between nations and private entities, as opposed to multilateral public approaches. At the very least, determining how to give some substantive legal and economic effect to the idea of farmers’ rights may provide a direction

³⁰³ Heller & Eisenberg, *supra* note 50, at 698-99 (referring to situation above as “tragedy of the anticommons”).

³⁰⁴ See BRUSH, *supra* note 302, at 232.

³⁰⁵ *Id.* at 236-37.

³⁰⁶ *Id.* at 237.

³⁰⁷ *Id.* at 237-38.

³⁰⁸ Chon, *supra* note 14, at 2885 (proposing that substantive equality principle be integrated throughout IP globalization decision-making).

in which to move that would promote distinct salutary distributive effects. Additionally, the prohibition on obtaining IP for genetic materials “in the form received” limitation (or rather lack of limitation) and on obtaining IP for genetic materials “in the form received” could be changed. One analogous example would be to make the IP “viral” in the same way that the General Public License for open source software “infects” any software that incorporates open source, making the subsequent combined software open source as well.³⁰⁹ Introducing a Bio-Linux licensing scheme in this context would be satisfyingly ironic because it would use private contract law to safeguard a global public good from privatization.³¹⁰

CONCLUSION: SYNCRETISM AND INTELLECTUAL PROPERTY

One lesson taught by the twentieth [century] and surely applicable to the twenty-first is that there is reason to be wary

³⁰⁹ For comprehensive discussions of the open source movement, see generally Yochai Benkler, *Coase's Penguin, or, Linux and the Nature of the Firm*, 112 YALE L.J. 369 (2002); David McGowan, *Legal Implications of Open-Source Software*, 2001 U. ILL. L. REV. 241 (2001). See also JANET ELIZABETH HOPE, *OPEN SOURCE BIOTECHNOLOGY* (2004); GLYN MOODY, *REBEL CODE: THE INSIDE STORY OF LINUX AND THE OPEN SOURCE REVOLUTION* (2001); *OPEN SOURCES: VOICES FROM THE OPEN SOURCE REVOLUTION* (Chris Di Bona et al. eds., 1999); STEVE WEBER, *THE SUCCESS OF OPEN SOURCE* (2004); Sara Boettiger & Dan. L. Burk, *Open Source Patenting*, 1 J. INT'L BIOTECH L. 221 (2004); Joel West, *How Open Is Open Enough?: Melding Proprietary and Open Source Platform Strategies*, 32 RES. POL'Y 1259 (2003); Richard P. Gabriel & Ron Goldman, *Open Source: Beyond the Fairytales* (Sept. 17, 2002) (unpublished paper), available at <http://opensource.mit.edu/papers/gabrielgoldman.pdf>; Open Source Initiative, <http://www.opensource.org/> (last visited Nov. 28, 2006).

³¹⁰ See generally Stephen M. Maurer et al., *Finding Cures for Tropical Diseases: Is Open Source an Answer?*, 6 MINN. J. L. SCI. & TECH. 169 (2004) (discussing initiatives undertaken by Professor Arti Rai of Duke Law School to apply open source licensing principles in pharmaceutical area). BIOS, founded by Richard Jefferson, proposed a spoke-and-wheel method of implementing such a scheme. As envisioned:

[F]or example, a BIOS group, or node, might contain a core technology, or groups of technologies, necessary for introducing new genes into plants. Such technologies would not have to be superior to existing commercial technologies. They would just need to provide a sufficiently effective tool for engaging in the basic research such that developing nations, small biotechnology companies, and public research agencies will be able to engage in research without becoming ensnared in current patent traps.

Robin Feldman, *The Open Source Biotechnology Movement: Is It Patent Misuse?*, 6 MINN. J. L. SCI. & TECH. 117, 126-27 (2004). BIOS stands for Biological Innovation for Open Society. For more information, see BIOS' website, <http://www.bios.net> (last visited Nov. 28, 2006).

of totalizing solutions to complex social problems Robert Conquest has noted that our times are littered with the ruins of failed utopias that caused untold misery. The alternative is an approach that [he] calls imaginative realism, a willingness to accept a degree of imperfection in the interest of balance “between the individual and the community, between the desirable and the possible, between our knowledge and our imagination.”³¹¹

Melding with, Instead of Subsuming. This Article reviewed significant recent work by Chon, Chander, Sunder, and others on the distributive aspects of IP law’s benefits and burdens. This Article used three examples — American racial slavery, American blues traditions, and seed germplasm in the contemporary era of globalization — to make a few points. First, the slavery example showed how the relationship among technology, IP, and race contributed to crude structural subordination with the ironic twist that an invention arguably created by a slave was used to extend the economic viability of an inefficient and brutal institution. The example of the blues showed that lags between technology and copyright law may produce conditions that give rise to exploitation, but may also help create conditions for vibrant cultural production. In order to address exploitation, expanded IP rights may help, but at the expense of extinguishing vibrant, communal cultural production. A key question is whether it is possible for expanded IP rights and vibrant, communal cultural production to coexist or whether the former makes the latter impossible. A syncretic legal sensibility that attempts to dialogue with and engage preexisting difference and inequality related to that difference, instead of subsuming alternate modes of cultural production, is crucial when approaching these issues.

The Operation was a Success, but the Patient Died. The final example returned to the question of technology, IP, and structural subordination. Instead of social collectives (chattel slaves), or individuals or artistic subgroups (black blues musicians), the salient dimension is how one group of nations (the OECD countries) have locked another group of nations (the developing countries) into a structurally subordinate position via IP protection for seed germplasm used to grow staple crops. As with the blues, lack of IP protection may have given rise to unjust exploitation and appropriation of raw genetic materials. However, is the solution necessarily expanded IP

³¹¹ BROWN, *supra* note 1, at 8 (citing ROBERT CONQUEST, REFLECTIONS ON A RAVAGED CENTURY 18 (2000)).

rights for all? To put it another way, expanded IP rights on a global scale may be, in the area of crop genetic resources, a way of killing the goose that has laid golden eggs for 10,000 years. For the sake of the global food supply and crop genetic diversity, will the disappearance of common heritage treatment of PGRs destroy the very resource that the move to sovereign property was meant to preserve? To what extent does IP law extinguish the communal, undeniably innovative, and syncretic activities and practices that farmers have engaged in for millennia? Is the trade-off between supposed IP gains from monetary incentives worth the loss of, or serious reduction in, access to plant genetic resources? All three examples ask how we legally construct the public domain. If we do not take into account the distributive effects of IP law and practices, the question is this: *Do we control our institutions and inventions or do they, like Frankenstein's monster, control us?*³¹²

³¹² See Peter M. Gerhart, *Distributive Values and Institutional Design in the Provision of Global Public Goods*, in INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME, *supra* note 24, at 76-77 (arguing for creation of international institutions or mechanisms for determining how wealth related to IP should be distributed and redistributed, because “market systems have always benefited from, and flourished with systems of social protection . . . [and] [w]e might find that globalization would flourish more if we could take advantage of opportunities to tax those who benefit from [the international IP system] . . . in order to support those who do not”).