

RETHINKING EDUCATION THEFT THROUGH THE LENS OF INTELLECTUAL PROPERTY AND HUMAN RIGHTS

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This Essay problematizes the increased propertization and commodification of education and calls for a rethink of the emergent concept of “education theft” through the lens of intellectual property and human rights. This concept refers to the phenomenon where parents, or legal guardians, enroll children in schools outside their school districts by intentionally violating the residency requirements. The Essay begins by revisiting the debate on intellectual property rights as property rights. It discusses the ill fit between intellectual property law and the traditional property model, the impediments the law has posed to public access to education, and select reforms that have emerged both inside and outside the property regime. The Essay then turns to the debate on property and education in the human rights context. It argues that the norms and practices relating to the human right to education provide important insights into the debate. It also states that the discussion in the human rights forum will help evaluate the effectiveness and limitations of introducing positive rights to foster public access to education. The Essay concludes by applying the insights gleaned from the debate on property and education in the intellectual property and human rights contexts to the phenomenon surrounding so-called “education theft.” Specifically, the Essay calls for the development of a more sophisticated understanding of property rights in their historical and socioeconomic contexts, a careful evaluation of the expediency of criminalizing residency requirement violations, and an exploration of potential technological solutions to address problems raised by these violations.

INTRODUCTION	1450
I. INTELLECTUAL PROPERTY	1453
A. Property Models	1454
B. Impediments to Education	1458
C. Endogenous Reforms.....	1464
D. Exogenous Reforms	1470

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II. HUMAN RIGHTS	1474
A. Need for Greater Linkage.....	1475
B. Intellectual Property and Human Rights.....	1479
C. Summary.....	1487
III. “EDUCATION THEFT”	1488
A. Developing a Contextualized Understanding	1489
B. Evaluating the Expediency of Criminalization	1493
C. Exploring Potential Technological Solutions	1499
CONCLUSION	1504

INTRODUCTION

In the past few years, courts, policymakers, and commentators have paid considerable attention to how the law engages with education. Later this term, the United States Supreme Court will decide *Students for Fair Admissions Inc. v. President & Fellows of Harvard College*, which addresses whether institutions of higher education can factor race into admissions decisions.¹ Politicians, prosecutors, and law enforcement officials have also actively pushed for increased criminal penalties for enrollment fraud or what they have called “education theft.”² Invoking property rights to emphasize the conduct’s wrongfulness,³ this label refers to an intentional violation of residency requirements for school enrollment to obtain “a seat in a classroom that the taxpayers . . . have designated for a resident child”—such as when a parent or legal guardian falsifies a nonresident child’s home address.⁴

1. 980 F.3d 157 (1st Cir. 2020), cert. granted, 142 S. Ct. 895 (2022); see also Yuvraj Joshi, *Racial Indirection*, 52 U.C. Davis L. Rev. 2495, 2556–67 (2019) (discussing the future of affirmative action that this litigation may have shaped).

2. Kyle Spencer, *Can You Steal an Education? Wealthy School Districts Are Cracking Down on “Education Thieves”*, Hechinger Rep. (May 18, 2015), <https://hechingerreport.org/can-you-steal-an-education/> [https://perma.cc/HXK5-MQDM]. See generally LaToya Baldwin Clark, *Education as Property*, 105 Va. L. Rev. 397, 403–21 (2019) [hereinafter Baldwin Clark, *Education as Property*] (discussing the use of residency, criminal, civil, and education laws to combat the phenomenon of “stealing education”); LaToya Baldwin Clark, *Stealing Education*, 68 UCLA L. Rev. 566 (2021) [hereinafter Baldwin Clark, *Stealing Education*] (discussing the phenomenon of “stealing education”); La Darien Harris, Note, *The Criminalization of School Choice: Punishing the Poor for the Inequities of Geographic School Districting*, 44 J. Legis. 306 (2018) (discussing the criminalization of residency requirement violations).

3. Cf. Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 Tex. L. Rev. 873, 896 (1997) (reviewing James Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society* (1996)) (noting that “‘infringement’ may be a morally neutral term, but ‘theft’ is clearly wrong”).

4. Baldwin Clark, *Education as Property*, supra note 2, at 411; see also id. at 406 & n.47 (listing the statutory provisions that criminalize theft of education); Baldwin Clark,

In academic literature, Professor LaToya Baldwin Clark wrote a pioneering article entitled *Education as Property*, which explores the phenomenon of “stealing education” and criticizes local school districts and law enforcement authorities for perpetuating stratification and inequality through surveillance and punishment.⁵ Professor Erika Wilson discusses how the maintenance of predominantly white school districts can generate a process of “social closure” that enables one group to monopolize advantages by closing off opportunities to other groups, usually racialized minorities.⁶ Professor Rachel Moran laments how increased commodification, segmentation, and stratification have undermined the “democratic promise of higher education.”⁷ And Professors Michelle Wilde Anderson and Nicole Stelle Garnett have separately written about the changing educational landscapes, covering issues such as school closures and the formation and dissolution of school districts.⁸

Although intellectual property law seems quite far away from these issues, it is very familiar with the debate on property and education and has much to contribute. Enacted through a constitutional clause that aims to “promote the Progress of Science and useful Arts,”⁹ copyright¹⁰ and patent laws provide incentives to ensure the development of knowledge, learning materials, and educational technologies.¹¹ Yet, the continuous

Stealing Education, *supra* note 2, at 592–98 (discussing those laws); Harris, *supra* note 2, at 319–27 (discussing laws criminalizing theft of education in Connecticut, Maryland, Ohio, Oklahoma, Pennsylvania, and the District of Columbia).

5. Baldwin Clark, *Education as Property*, *supra* note 2, at 421–24. See generally LaToya Baldwin Clark, *Barbed Wire Fences: The Structural Violence of Education Law*, 89 U. Chi. L. Rev. 499 (2022) [hereinafter Baldwin Clark, *Barbed Wire Fences*] (arguing that the structure of U.S. education not only fails to address Black childhood poverty but has also caused tangible harm to poor Black children); Baldwin Clark, *Stealing Education*, *supra* note 2 (arguing that laws against “stealing education” contribute to race–class opportunity hoarding and segregation).

6. See Erika K. Wilson, *Monopolizing Whiteness*, 134 Harv. L. Rev. 2382, 2388–414 (2021).

7. See Rachel F. Moran, *City on a Hill: The Democratic Promise of Higher Education*, 7 U.C. Irvine L. Rev. 73, 75 (2017).

8. See generally Michelle Wilde Anderson, *Making a Regional District: Memphis City Schools Dissolves Into Its Suburbs*, 112 Colum. L. Rev. Sidebar 47 (2012); Margaret F. Brinig & Nicole Stelle Garnett, *Catholic Schools and Broken Windows*, 9 J. Empirical Legal Stud. 347 (2012); Nicole Stelle Garnett, *Disparate Impact, School Closures, and Parental Choice*, 2014 U. Chi. Legal F. 289.

9. U.S. Const. art. I, § 8, cl. 8.

10. The origin of the U.S. copyright law can be traced back to the English Statute of Anne, which was formally titled “An Act for the Encouragement of Learning.” An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of Such Copies, During the Times Therein Mentioned 1710, 8 Ann. c. 19 (Eng.).

11. See William M. Landes & Richard A. Posner, *The Economic Structure of Intellectual Property Law* 294–310 (2003) [hereinafter Landes & Posner, *Economic Structure*] (discussing the economic logic of patent law); William M. Landes & Richard A.

expansion of intellectual property rights has greatly reduced public access to education. By enabling rights holders to charge supracompetitive prices—prices that exceed what can be charged in a competitive market—intellectual property rights have made textbooks, research materials, and educational technologies unaffordable.¹² Even well-resourced universities have struggled with increased subscription fees for academic and scientific journals.¹³ In addition, because intellectual property law enables rights holders to decide whether to release the protected products and technologies in local languages or commercially unattractive markets, members of marginalized and disadvantaged communities often do not have ready access to those products and technologies even if they manage to secure the needed economic resources.¹⁴

This Essay problematizes the increased propertization and commodification of education and calls for a rethink of the emergent concept of “education theft” through the lens of intellectual property and human rights. Part I explores the debate on property and education in the intellectual property context. To foreground the problems raised by property rhetoric in general and the “theft” label in particular, this Part revisits the debate on intellectual property rights as property rights. It discusses the ill fit between intellectual property law and the traditional property model as well as the impediments this law has posed to public access to education. This Part then outlines select reforms advanced by courts, policymakers, and commentators both inside and outside the property regime to improve such access. Because this Essay focuses on education, the discussion of intellectual property rights inevitably gravitates toward copyright law—and, to a lesser extent, patent law. Nevertheless, it is worth keeping in mind that other forms of intellectual property rights can also impede public access to education.¹⁵

Posner, *An Economic Analysis of Copyright Law*, 18 *J. Legal Stud.* 325, 326–33 (1989) [hereinafter *Landes & Posner, Economic Analysis*] (discussing the basic economics of copyright).

12. See *infra* text accompanying notes 48–50.

13. See, e.g., Alex Fox & Jeffrey Brainard, *University of California Boycotts Publishing Giant Elsevier Over Journal Costs and Open Access*, *Science* (Feb. 28, 2019), <https://www.science.org/content/article/university-california-boycotts-publishing-giant-elsevier-over-journal-costs-and-open> [<https://perma.cc/E5SW-ZUR3>] (reporting the University of California System’s boycott of journal subscriptions from Elsevier due partly to the publisher’s refusal to reduce subscription fees); Ian Sample, *Harvard University Says It Can’t Afford Journal Publishers’ Prices*, *Guardian* (Apr. 24, 2012), <https://www.theguardian.com/science/2012/apr/24/harvard-university-journal-publishers-prices> [<https://perma.cc/BD7X-T5XY>] (“[A] memo from Harvard’s faculty advisory council said major publishers had created an ‘untenable situation’ at the university by making scholarly interaction ‘fiscally unsustainable’ and ‘academically restrictive’, while drawing profits of 35% or more.”).

14. See *infra* text accompanying notes 63–64.

15. An example that has received considerable attention during the COVID-19 pandemic is the need for disclosure of tacit knowledge to facilitate the development of

Part II turns to the debate on property and education in the human rights context. The human rights forum is selected for two reasons. First, the norms and practices relating to the human right to education provide important insights into this debate. In fact, commentators have increasingly called for the use of a right to education—both domestically and internationally—to improve public access to education.¹⁶ Second, the human rights forum is accustomed to clashes between competing interests cloaked in rights, such as the tensions and conflicts between the right to education and the right to the protection of the interests resulting from intellectual productions.¹⁷ The discussion in the human rights forum will therefore help evaluate the effectiveness and limitations of a key line of reform advanced in the previous Part—the introduction of positive rights to foster public access to education.

Part III applies the insights gleaned from the debate on property and education in the intellectual property and human rights contexts to the phenomenon surrounding so-called “education theft.” This Part calls for the development of a more sophisticated understanding of property rights in their historical and socioeconomic contexts, a careful evaluation of the expediency of criminalizing residency requirement violations, and an exploration of potential technological solutions to address problems raised by these violations.

I. INTELLECTUAL PROPERTY

Intellectual property law is familiar with the debate on property and education. Although the term “intellectual property” includes the word

vaccines and other health products and technologies. See Peter Lee, *New and Heightened Public–Private Quid Pro Quos: Leveraging Public Support to Enhance Private Technical Disclosure*, in *Intellectual Property, COVID-19, and the Next Pandemic: Diagnosing Problems, Developing Cures* (Madhavi Sunder & Sun Haochen eds., forthcoming 2023), <https://ssrn.com/abstract=4058717> [<https://perma.cc/2NZC-7SMD>].

16. See *infra* text accompanying notes 122–126.

17. For the author’s prior work in this area, see generally Peter K. Yu, *The Anatomy of the Human Rights Framework for Intellectual Property*, 69 *SMU L. Rev.* 37 (2016) [hereinafter Yu, *Anatomy*]; Peter K. Yu, *Intellectual Property and Human Rights 2.0*, 53 *U. Rich. L. Rev.* 1375 (2019) [hereinafter Yu, *Human Rights 2.0*]; Peter K. Yu, *Intellectual Property and Human Rights in the Nonmultilateral Era*, 64 *Fla. L. Rev.* 1045 (2012) [hereinafter Yu, *Nonmultilateral Era*]; Peter K. Yu, *Intellectual Property, Human Rights, and Methodological Reflections*, in *Handbook of Intellectual Property Research: Lenses, Methods, and Perspectives* 182 (Irene Calboli & Maria Lillà Montagnani eds., 2021); Peter K. Yu, *Reconceptualizing Intellectual Property Interests in a Human Rights Framework*, 40 *U.C. Davis L. Rev.* 1039 (2007) [hereinafter Yu, *Reconceptualizing Intellectual Property Interests*].

“property” in terminology, statutory language,¹⁸ and case law,¹⁹ commentators have lamented the overemphasis on the property aspects of intellectual property rights and the increased expansion of these rights. To show the ill fit between intellectual property law and the traditional property model, this Part revisits the debate on intellectual property rights as property rights, which became prominent in the 1990s following the mainstreaming of the internet and remained vibrant through the early 2000s.²⁰ This Part criticizes the usual narrative advanced by policymakers, legislators, and industry representatives that equates intellectual property infringement with theft.²¹ It then discusses the impediments intellectual property rights have posed to public access to education. This Part further explores the different reforms advanced by courts, policymakers, and commentators both inside and outside the property regime to cabin the excesses of intellectual property law.

A. *Property Models*

Intellectual property is fundamentally different from tangible property: It has the characteristics of a nonrivalrous and nonexcludable good.²² Consider, for instance, the copyrighted content inside a property

18. See, e.g., 35 U.S.C. § 261 (2018) (“[P]atents shall have the attributes of personal property.”).

19. See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002) (“The monopoly [provided by patent laws] is a property right”); *Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 642 (1999) (“Patents . . . have long been considered a species of property.”); *Ex parte Wood*, 22 U.S. (9 Wheat.) 603, 608 (1824) (“The inventor has . . . a property in his inventions; a property which is often of very great value, and of which the law intended to give him the absolute enjoyment and possession.”).

20. See, e.g., Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 *Tex. L. Rev.* 1031 (2005) [hereinafter Lemley, *Free Riding*]; Stewart E. Sterk, *Intellectualizing Property: The Tenuous Connections Between Land and Copyright*, 83 *Wash. U. L.Q.* 417 (2005); Peter K. Yu, *Intellectual Property and the Information Ecosystem*, 2005 *Mich. St. L. Rev.* 1, 1–6 [hereinafter Yu, *Information Ecosystem*]. This debate can be traced back even earlier. See, e.g., Stephen L. Carter, *Does It Matter Whether Intellectual Property Is Property?*, 68 *Chi.-Kent L. Rev.* 715 (1993); Frank H. Easterbrook, *Intellectual Property Is Still Property*, 13 *Harv. J.L. & Pub. Pol’y* 108 (1990); Edmund W. Kitch, *Patents: Monopolies or Property Rights?*, 8 *Rsch. L. & Econ.* 31 (1986).

21. For critiques of the industry’s effort, see generally Patricia Loughlan, “You Wouldn’t Steal a Car . . .”: *Intellectual Property and the Language of Theft*, 29 *Eur. Intell. Prop. Rev.* 401 (2007); Peter K. Yu, *Digital Copyright and Confuzzling Rhetoric*, 13 *Vand. J. Ent. & Tech. L.* 881, 891–93 (2011) [hereinafter Yu, *Confuzzling Rhetoric*].

22. See generally Landes & Posner, *Economic Analysis*, *supra* note 11, at 344–61 (discussing the nonexcludable and nonrivalrous nature of intellectual property); *Understanding Knowledge as a Commons: From Theory to Practice* (Charlotte Hess & Elinor Ostrom eds., 2007) [hereinafter *Understanding Knowledge as a Commons*] (collecting essays that discuss the importance of treating knowledge as a commons); Joseph E. Stiglitz, *Knowledge as a Global Public Good*, *in* *Global Public Goods: International*

law casebook. A student's consumption of such content is nonrivalrous, as it does not prevent the casebook author and other students from using the same content. The knowledge derived from that casebook is also nonexcludable because, once that knowledge becomes available, any student can acquire the same knowledge, though not always to the same extent. As a result of these fundamental differences, intellectual property rights do not fit well with a property model²³ that aims to prevent conflicts between neighbors²⁴ and to reduce wasting scarce tangible resources.²⁵ Even though it is now common to link intellectual property to property, intellectual property has a longstanding association with tort law—business tort and unfair competition, in particular.²⁶ A case in point is Henry Wigmore's casebook on tort law.²⁷ Published more than a century ago, this book included various forms of intellectual property law under the heading "harms to sundry profitable relations."²⁸

Moreover, as Professors Mark Lemley and Brett Frischmann and other commentators have pointed out, while the traditional property model

Cooperation in the 21st Century 308 (Inge Kaul, Isabelle Grunberg & Marc A. Stern eds., 1999) (discussing knowledge as a global public good).

23. See William W. Fisher III, *Promises to Keep: Technology, Law, and the Future of Entertainment* 135 (2004) [hereinafter Fisher, *Promises to Keep*] ("It is far from obvious that legal rules appropriate for managing [unique or scarce] resources . . . would also be appropriate for managing resources [that could, in the absence of legal intervention, be made available to everyone simultaneously]."); Lemley, *Free Riding*, supra note 20, at 1032 ("[T]reating intellectual property as 'just like' real property is a mistake as a practical matter."); Sterk, supra note 20, at 421 ("Real property rights operate to avoid the 'tragedy of the commons'—a problem that does not arise with intellectual works—because once created, those works, unlike land, are non-rivalrous public goods.").

24. See Sterk, supra note 20, at 431–33 (discussing property as protection against breaches of the peace).

25. See *id.* at 426–31 (discussing property in relation to resource allocation). See generally Harold Demsetz, *Toward a Theory of Property Rights*, 57 *Am. Econ. Rev.* 347 (1967) (discussing how property rights promote efficiency by internalizing externalities).

26. See Fisher, *Promises to Keep*, supra note 23, at 135 ("For most of American (and world) history, copyrights, like patents, were more likely to be referred to as 'monopolies' than as property rights."); Lemley, *Free Riding*, supra note 20, at 1072 ("[I]n another era we treated intellectual property as a species of business tort, lodging trademarks and trade secrets in the *Restatement of Torts* and including chapters on copyright and patent in tort casebooks."); Pamela Samuelson, *Information as Property: Do Ruckelshaus and Carpenter Signal a Changing Direction in Intellectual Property Law?*, 38 *Cath. U. L. Rev.* 365, 399 (1989) ("What we now refer to as intellectual property law has long been part of unfair competition law."); Sterk, supra note 20, at 419 ("[C]opyright and patent infringement need not be treated as a species of theft or conversion, but could instead be treated as 'business torts,' akin to unfair competition or trademark infringement.").

27. John Henry Wigmore, *Select Cases on the Law of Torts With Notes, and a Summary of Principles* (1912).

28. *Id.* at 318–543; see also Lemley, *Free Riding*, supra note 20, at 1072 n.167 (noting the inclusion of intellectual property law in Professor Wigmore's casebook).

helps internalize negative externalities, the creation and use of intellectual property can generate positive externalities.²⁹ Professor Lemley writes:

If I plant beautiful flowers in my front lawn, I don't capture the full benefit of those flowers—passers-by can enjoy them too. But property law doesn't give me a right to track them down and charge them for the privilege Nor do I have the right to collect from my neighbors the value they get if I replace an unattractive shade of paint with a nicer one, or a right to collect from society at large the environmental benefits I confer by planting trees.³⁰

To accrue the social benefits provided by knowledge spillovers and to balance proprietary control and public access, intellectual property law introduces limitations and exceptions to exclusive rights.³¹ In doing so, the law avoids completely eradicating free riding. As Professors Eduardo Peñalver and Sonia Katyal remind us, free riding can be beneficial:

[I]ntellectual property rights, no less than rights in tangible property, are sticky. Once created, endowment effects, transaction costs, and political inertia combine to keep them in place. In many cases, some free riding may be essential to combat this inertia and force decision makers to consider altering the status quo.³²

The views of these commentators coincide with the position taken by many courts, even though other courts have taken contrary positions.³³ As the United States Supreme Court observed in *Dowling v. United States*, which involved the interstate transportation of bootleg Elvis Presley recordings and the National Stolen Property Act:

[I]nterference with copyright does not easily equate with theft, conversion, or fraud. . . . The infringer . . . does not assume physical control over the copyright; nor does he wholly deprive its owner of its use. While one may colloquially like[n] infringement with some general notion of wrongful appropriation, infringement plainly implicates a more complex

29. See Brett M. Frischmann & Mark A. Lemley, Spillovers, 107 Colum. L. Rev. 257, 258–85 (2007) (discussing the social benefits of spillovers); Lemley, Free Riding, supra note 20, at 1046–50 (explaining why the law should not allow property owners to fully capture the social value of their property).

30. Lemley, Free Riding, supra note 20, at 1048 (footnotes omitted).

31. See infra text accompanying notes 81–88.

32. Eduardo M. Peñalver & Sonia K. Katyal, Property Outlaws: How Squatters, Pirates, and Protesters Improve the Law of Ownership 45 (2010); see also Margaret Chon, Sticky Knowledge and Copyright, 2011 Wis. L. Rev. 177, 186–99 (discussing the stickiness of knowledge both inside and outside the intellectual property regime).

33. See *Grand Upright Music Ltd. v. Warner Bros. Records, Inc.*, 780 F. Supp. 182, 183 (S.D.N.Y. 1991) (“‘Thou shalt not steal’ has been an admonition followed since the dawn of civilization. . . . The conduct of the defendants herein . . . violates not only the Seventh Commandment, but also the copyright laws of this country.” (footnote omitted)).

set of property interests than does run-of-the-mill theft, conversion, or fraud.³⁴

In a civil action, the United States District Court for the Southern District of New York also maintained: “Copyright and trademark law are not matters of strong moral principle. Intellectual property regimes are economic legislation based on policy decisions that assign rights based on assessments of what legal rules will produce the greatest economic good for society as a whole.”³⁵ This view hinted at the usual distinction between *malum in se* and *malum prohibitum* in criminal law,³⁶ with intellectual property infringement falling in the latter category.

Although the traditional property model does not fit very well with intellectual property law, rights holders and their supportive industry groups and governments have continued to use property rhetoric to press for the expansion of intellectual property rights.³⁷ One only has to recall the motion picture industry’s ill-advised educational campaign in the mid-2000s that compared downloading movies to stealing a car.³⁸ As commentators have rightly observed, this misguided campaign conflated intangible property with tangible property and wrongly assumed that individual file-sharers could download a car the same way they downloaded music.³⁹

34. 473 U.S. 207, 217–18 (1985).

35. *Sarl Louis Feraud Int’l v. Viewfinder Inc.*, 406 F. Supp. 2d 274, 281 (S.D.N.Y. 2005), vacated, 489 F.3d 474 (2d Cir. 2007).

36. “An offense *malum in se* is properly defined as one which is naturally evil as adjudged by the sense of a civilized community, whereas an act *malum prohibitum* is wrong only because made so by statute.” *State v. Horton*, 51 S.E. 945, 946 (N.C. 1905).

37. See David Fagundes, *Property Rhetoric and the Public Domain*, 94 *Minn. L. Rev.* 652, 691 (2010) (“Content industries currently deploy, with great effect, property romance as a rhetorical strategy designed to protect and extend their entitlements in information resources.”); Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing*, 17 *Harv. J.L. & Tech.* 1, 22 (2003) (“The copyright industries regularly employ the rhetoric of private property to support their lobbying efforts and litigation.”); Yu, *Confuzzling Rhetoric*, *supra* note 21, at 891–92 (noting that “linking intellectual property to tangible property has its rhetorical advantages, especially on the Capitol Hill”); see also Mary Ann Glendon, *Rights Talk: The Impoverishment of Political Discourse* 31 (1991) [hereinafter *Glendon, Rights Talk*] (“In America, when we want to protect something, we try to get it characterized as a right. To a great extent, . . . when we *specialy* want to hold on to something . . . , we try to get the object of our concern characterized as a property right.”); Lemley, *Free Riding*, *supra* note 20, at 1046 (“[P]roperty theory . . . provides intellectual heft to justify the expansion and . . . offers courts an attractive label—“free rider”—that they can use both to identify undesirable conduct and to justify its suppression.”).

38. See Loughlan, *supra* note 21, at 401 (providing the text of the motion picture industry’s commercial).

39. See James Boyle, *The Public Domain: Enclosing the Commons of the Mind* 63 (2008); Loughlan, *supra* note 21, at 402–03; Yu, *Confuzzling Rhetoric*, *supra* note 21, at 892. One cannot help but wonder whether the theft used in this context is closer to what has been termed “literary theft,” “time theft,” or “wage theft.” See, e.g., Rebecca Berke

At the international level, property rhetoric has also been increasingly invoked to strengthen intellectual property protection. In the past decade, some multinational corporations have actively used international investment agreements to strengthen cross-border protection of intellectual property rights.⁴⁰ Because arbitrators involved in investor–state disputes tend to emphasize the property aspects of intellectual property rights,⁴¹ these corporations filed investor–state complaints to replace or supplement domestic litigation in host states.⁴² Among the most notable cases are complaints filed by Philip Morris against Australia and Uruguay,⁴³ Eli Lilly against Canada,⁴⁴ Bridgestone against Panama,⁴⁵ and the Einarssons and Geophysical Service Inc. against Canada.⁴⁶

B. *Impediments to Education*

Thus far, commentators have heavily criticized the continuous expansion of intellectual property rights. There are three general critiques of intellectual property law in the area of education and scientific research. First, the protection of intellectual property rights prevents or reduces access to educational materials and technologies, especially when those rights do not reflect an appropriate balance between proprietary control

Galemba, *Laboring for Justice: The Fight Against Wage Theft in an American City* 4 (2023) (“Wage theft . . . occurs when employers underpay workers . . . or refuse to pay them at all . . .”); Stuart P. Green, *Plagiarism, Norms, and the Limits of Theft Law: Some Observations on the Use of Criminal Sanctions in Enforcing Intellectual Property Rights*, 54 *Hastings L.J.* 167, 218–28 (2002) (exploring whether plagiarism constitutes theft); Laureen Snider, *Theft of Time: Disciplining Through Science and Law*, 40 *Osgoode Hall L.J.* 89, 90 (2002) (defining time theft “as the misuse of the employer’s time and property by an employee”).

40. See generally Peter K. Yu, *The Investment-Related Aspects of Intellectual Property Rights*, 66 *Am. U. L. Rev.* 829 (2017) [hereinafter Yu, *Investment-Related Aspects*] (discussing the rise of investor–state disputes in the intellectual property context).

41. See Pratyush Nath Upreti, *Intellectual Property Objectives in International Investment Agreements* 54–85 (2022) (discussing the property protection of investment assets); see also Yu, *Investment-Related Aspects*, supra note 40, at 857–58 (criticizing the arbitrators’ tunnel vision in investor–state dispute settlement proceedings).

42. Investor–state dispute settlement allows multinational corporations to use international arbitration to resolve cross-border intellectual property disputes with host states. See Peter K. Yu, *The Pathways of Multinational Intellectual Property Dispute Settlement*, in *Intellectual Property and International Dispute Resolution* 123, 132–36 (Christopher Heath & Anselm Kamperman Sanders eds., 2019).

43. *Philip Morris Asia Ltd. v. Commonwealth of Austl.*, PCA Case No. 2012-12, Award on Jurisdiction and Admissibility (Dec. 17, 2015); *Philip Morris Brands Sàrl v. Oriental Republic of Uru.*, ICSID Case No. ARB/10/7, Award (July 8, 2016).

44. *Eli Lilly & Co. v. Gov’t of Can.*, ICSID Case No. UNCT/14/2, Final Award (Mar. 16, 2017).

45. *Bridgestone Licensing Servs., Inc. v. Republic of Pan.*, ICSID Case No. ARB/16/34, Award (Aug. 14, 2020).

46. *Einarsson v. Gov’t of Can.*, ICSID Case No. UNCT/20/6, Notice of Arbitration (Apr. 18, 2019).

and public access.⁴⁷ By enabling rights holders to charge supracompetitive prices while giving them a right to exclude, intellectual property law has made many of these materials and technologies inaccessible to those in need.⁴⁸ While the law contains limitations and exceptions that allow the public to access abstract ideas and general knowledge,⁴⁹ such access does not extend to educational materials and technologies in their entirety.⁵⁰ The use of these educational tools is integral to learning, especially when they have been adapted to meet local needs.⁵¹ Indeed, education experts have widely agreed on the immense benefits provided by textbooks and

47. See generally Klaus D. Beiter, *Not the African Copyright Pirate Is Perverse, but the Situation in Which (S)He Lives—Textbooks for Education, Extraterritorial Human Rights Obligations, and Constitutionalization “From Below”* in *IP Law*, 26 *Buff. Hum. Rts. L. Rev.* 1 (2020) [hereinafter Beiter, *African Copyright Pirate*] (discussing access to textbooks in Africa in the human rights context); Margaret Chon, *Intellectual Property “From Below”: Copyright and Capability for Education*, 40 *U.C. Davis L. Rev.* 803, 821–27 (2007) [hereinafter Chon, *Intellectual Property “From Below”*] (discussing the limited access to textbooks in developing countries and the linkage between educational access and copyright).

48. See Landes & Posner, *Economic Structure*, supra note 11, at 294–310; Landes & Posner, *Economic Analysis*, supra note 11, at 326–33.

49. See 17 U.S.C. § 102(b) (2018) (denying copyright protection to “idea, procedure, process, system, method of operation, concept, principle, or discovery”); *Diamond v. Diehr*, 450 U.S. 175, 185 (1981) (holding that patent protection does not extend to “laws of nature, natural phenomena, and abstract ideas”).

50. Although the discussion of learning materials tends to focus on textbooks or other physical materials, the availability of educational technologies is equally important. See *Comm. on Econ., Soc. & Cultural Rts.*, General Comment No. 13: *The Right to Education* (Article 13 of the Covenant), ¶ 6(a), U.N. Doc. E/C.12/1999/10 (Dec. 8, 1999) [hereinafter *General Comment No. 13*] (noting that the availability requirement in the right to education extends to not only teaching materials but also information technology); Jan van Dijk, *The Digital Divide 77–79* (2020) (noting the importance of digital skills, and often content-related digital skills, in the twenty-first century).

51. See Susan Isiko Šurba, *International Copyright Law and Access to Education in Developing Countries: Exploring Multilateral Legal and Quasi-Legal Solutions* 27 (2012) (“[A]ccess to educational material is not just a choice, but rather a necessity in order to enable an individual to integrate and compete in society.”); Chon, *Intellectual Property “From Below”*, supra note 47, at 823–24 (discussing the impact of textbook availability on basic learning); Fons Coomans, *Content and Scope of the Right to Education as a Human Right and Obstacles to Its Realization*, in *Human Rights in Education, Science and Culture: Legal Developments and Challenges* 183, 220 (Yvonne Donders & Vladimir Volodin eds., 2007) [hereinafter *Coomans, Content and Scope*] (“A school curriculum that is not adapted to the needs of learners and to their cultural identity, diversity and socio-economic background will not help students to acquire knowledge and skills they can use in practice”); Sharon E. Foster, *The Conflict Between the Human Right to Education and Copyright*, in *Intellectual Property Law and Human Rights* 353, 354 (Paul L.C. Torremans ed., 4th ed. 2020) (discussing the improvements that increased access to instructional materials can provide to education systems). See generally Lea Shaver, *The Right to Read*, 54 *Colum. J. Transnat’l L.* 1 (2015) (calling for the creation of the right to read to ensure individual access to an adequate supply of reading material for both learning and pleasure).

other learning materials and technologies.⁵² As if the lack of access to these materials and technologies were not challenging enough, the past two decades have seen growing threats to public access to education through an active push by intellectual property rights holders and their supportive politicians and industry groups for finer-grained protections, such as those for data and databases,⁵³ and the ubiquitous use of contracts and extralegal measures.⁵⁴ The latter includes the deployment of technological protection measures to lock up both copyrighted and unprotected educational content.⁵⁵

Second, intellectual property law can prevent the dissemination of knowledge and research. As the U.N. Committee on Economic, Social and Cultural Rights (“CESCR”) recently observed: “[S]ome intellectual property regulations limit the sharing of information on scientific research for a certain period [T]he excessive price of some scientific publications is an obstacle for low-income researchers, especially in developing countries.”⁵⁶ In addition, strong intellectual property rights

52. See Stephen P. Heyneman, *The Role of Textbooks in a Modern Education System: Towards High Quality Education for All*, in *Textbooks and Quality Learning for All: Some Lessons Learned From International Experience* 31, 38 (Cecilia Braslavsky ed., 2006) (“[T]extbook availability was the single most consistent correlate of academic achievement in developing countries, thus justifying public investment in education reading materials.” (citations omitted)).

53. See Agreement on Trade-Related Aspects of Intellectual Property Rights art. 39.3, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299 (offering protection to undisclosed test or other data for pharmaceutical and agrochemical products); Council Directive 1996/9, art. 7(1), 1996 O.J. (L 77) 20 (EC) (offering sui generis protection to databases that are created as a result of “a substantial investment in either the obtaining, verification or presentation of the [database] contents”); Commission Communication on Building a European Data Economy, at 13, COM (2017) 9 final (Oct. 1, 2017) (proposing a new sui generis data producer’s right for non-personal, anonymized machine-generated data). See generally Peter K. Yu, *Data Exclusivities and the Limits to TRIPS Harmonization*, 46 Fla. St. U. L. Rev. 641, 647–85 (2019) (discussing the protection for test and other data in the TRIPS Agreement and TRIPS-plus bilateral, regional, and plurilateral agreements); Peter K. Yu, *Data Producer’s Right and the Protection of Machine-Generated Data*, 93 Tul. L. Rev. 859, 884–96 (2019) (critiquing the European Commission’s proposal for data producer’s right).

54. See Peter K. Yu, *Five Disharmonizing Trends in the International Intellectual Property Regime*, in 4 *Intellectual Property and Information Wealth: Issues and Practices in the Digital Age* 73, 91–96 (Peter K. Yu ed., 2007) [hereinafter *Intellectual Property and Information Wealth*] (discussing the trend of rights holders using mass-market contracts and technological protection measures).

55. See 17 U.S.C. § 1201 (2018) (offering protection against the circumvention of technological protection measures).

56. Comm. on Econ., Soc. & Cultural Rts., General Comment No. 25 (2020) on Science and Economic, Social and Cultural Rights (Article 15(1)(b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights), ¶ 61, U.N. Doc. E/C.12/GC/25 (Apr. 30, 2020) [hereinafter *General Comment No. 25*]; see also Farida Shaheed (Special Rapporteur in the Field of Cultural Rights), *Copyright Policy and the Right to Science and Culture*, ¶ 79, U.N. Doc. A/HRC/28/57 (Dec. 24, 2014) [hereinafter

could create what Professors Michael Heller and Rebecca Eisenberg have referred to as the “tragedy of the anticommons,”⁵⁷ in which “multiple owners each have a right to exclude others from a scarce resource and no one has an effective privilege of use.”⁵⁸ It is therefore no surprise that human rights bodies and advocates have strongly supported open-science and open-licensing initiatives.⁵⁹ The past few years have also seen commentators and nonprofit organizations actively pushing for the recognition of the right to research to facilitate the use of intellectual property for educational and research purposes—whether authorized or unauthorized.⁶⁰

Third, intellectual property rights can skew the funding for research and for the production of educational materials and technologies.⁶¹ The benefits provided by existing intellectual property law skew production toward commercially successful projects, thereby causing the unavailability of other projects.⁶² At the international level, the lack of availability of

Special Rapporteur’s Report on Copyright Policy] (“For-profit academic journals and publishers often prohibit author-researchers from making their own material accessible over the Internet, in order to maximize subscription fees. The prevailing restricted-access dissemination model limits the ability to share published scientific knowledge, inhibiting the emergence of a truly global and collaborative scientific community.”).

57. See generally Michael Heller, *The Gridlock Economy: How Too Much Ownership Wrecks Markets, Stops Innovation, and Costs Lives* 49–78 (2008) (discussing gridlock in biomedical research); Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *Science* 698 (1998) (discussing the tragedy of the anticommons in biomedical research).

58. Heller & Eisenberg, *supra* note 57, at 698.

59. See General Comment No. 25, *supra* note 56, ¶ 16 (“States should promote open science and open source publication of research. Research findings and research data funded by States should be accessible to the public.”); Special Rapporteur’s Report on Copyright Policy, *supra* note 56, ¶ 113 (“Public and private universities and public research agencies should adopt policies to promote open access to published research, materials and data on an open and equitable basis, especially through the adoption of Creative Commons licences.”).

60. See, e.g., Christophe Geiger & Bernd Justin Jütte, *The Right to Research as Guarantor for Sustainability, Innovation and Justice in EU Copyright Law*, in *Intellectual Property Rights in the Post Pandemic World: An Integrated Framework of Sustainability, Innovation and Global Justice* (Taina E. Pihlajarinne, Jukka Mähönen & Pratyush Upreti eds., forthcoming 2023); Am. Univ. Wash. Coll. of L., Annual Meeting of the Global Expert Network on Copyright User Rights: The Right to Research in International Copyright, Program on Info. Just. & Intell. Prop. (Apr. 21, 2022), <https://www.wcl.american.edu/impact/initiatives-programs/pijip/events/annual-meeting-of-the-global-expert-network-on-copyright-user-rights/> [<https://perma.cc/95XD-U3D5>] (providing information about a public symposium on the right to research in international copyright law).

61. See General Comment No. 25, *supra* note 56, ¶ 61 (“[I]ntellectual property can sometimes create distortions in the funding of scientific research as private financial support might go only to research projects that are profitable, while funding to address issues that are crucial for economic, social and cultural rights might not be adequate . . .”).

62. See generally *Access to Knowledge in the Age of Intellectual Property* (Gaëlle Krikorian & Amy Kapczynski eds., 2010) [hereinafter *Access to Knowledge*] (collecting

foreign-language books is particularly notorious and has caused “book famines” in many countries and communities.⁶³ As Professor Lea Shaver (now Bishop) laments:

[T]he Zulu language . . . is spoken by ten million people in South Africa. The vast majority of Zulu speakers are literate. Every day, Zulu newspapers sell hundreds of thousands of copies. With an average household income around \$5,000 U.S., however, very few Zulu speakers can afford to purchase books. As a logical consequence, the Zulu book publishing industry is next to non-existent. The Publishers’ Association of South Africa counts only seven hundred Zulu books currently in print.⁶⁴

Beyond these usual critiques, policymakers and commentators have criticized intellectual property law for not offering protection to all forms of creativity and innovation. Notably excluded are traditional knowledge and traditional cultural expressions.⁶⁵ These creations reside in the public domain for all to use,⁶⁶ due to the fact that they either were created in the past or failed to meet other eligibility requirements under existing intellectual property law.⁶⁷ To correct this oversight, the World Intellectual Property Organization (WIPO) established the Intergovernmental

essays that discuss the need for access to knowledge and the Access to Knowledge Movement).

63. See Special Rapporteur’s Report on Copyright Policy, *supra* note 56, ¶ 68 (“[C]opyright protection offers little financial incentive to write and publish in most of the world’s languages. People able to speak English, French or Spanish can select reading material from millions of books; however, those unable to speak a globally used language may enjoy access to very few.” (footnote omitted)). See generally Lea Shaver, *Ending Book Hunger: Access to Print Across Barriers of Class and Culture* (2019) [hereinafter Shaver, *Ending Book Hunger*] (detailing the difficulties caused by book famine across impoverished communities around the world).

64. Shaver, *Ending Book Hunger*, *supra* note 63, at 7–8.

65. See U.N. High Commissioner for Human Rights, *The Impact of the Agreement on Trade-Related Aspects of Intellectual Property Rights on Human Rights*: Rep. of the High Commissioner, ¶ 26, U.N. Doc. E/CN.4/Sub.2/2001/13 (June 27, 2001) (“[N]o mention is made [in the TRIPS Agreement] of the need to protect the cultural heritage and technology of local communities and indigenous peoples.”). See generally Peter K. Yu, *Cultural Relics, Intellectual Property, and Intangible Heritage*, 81 *Temp. L. Rev.* 433 (2008) (discussing the protection of traditional knowledge and traditional cultural expressions).

66. See Peter K. Yu, Note, *Fictional Persona Test: Copyright Preemption in Human Audiovisual Characters*, 20 *Cardozo L. Rev.* 355, 372 n.104 (1998) (defining the public domain as “the place where fundamental building materials of a new work, such as ideas, concepts, historical facts, discoveries, and technological solutions, reside and are freely available”). For foundational articles on the public domain, see generally Jessica Litman, *The Public Domain*, 39 *Emory L.J.* 965 (1990); David Lange, *Recognizing the Public Domain*, *Law & Contemp. Probs.*, Autumn 1981, at 147.

67. See 17 U.S.C. § 102(a) (2018) (stating that “[c]opyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression”); 35 U.S.C. § 102(a) (2018) (“A person shall be entitled to a patent unless . . . the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention . . .”).

Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore in September 2000 to explore the feasibility of setting new international norms.⁶⁸ After more than two decades of back-and-forth negotiations, WIPO members finally agreed in July 2022 to hold a diplomatic conference to consider the Draft International Legal Instrument Relating to Intellectual Property, Genetic Resources and Traditional Knowledge Associated with Genetic Resources.⁶⁹ If adopted, this new instrument will strengthen protection of traditional knowledge and traditional cultural expressions and, in turn, support education within and in connection with traditional and Indigenous communities.⁷⁰

Finally, the existing intellectual property system has raised difficult moral questions. Intellectual property law tends to privilege the rich at the expense of the poor.⁷¹ A 2001 World Bank study estimated that the adoption of the Agreement on Trade-Related Aspects of Intellectual Property Rights of the World Trade Organization, the predominant multilateral intellectual property instrument, has resulted in rent transfers of more than twenty billion dollars from developing countries “to major technology-creating countries—particularly the United States, Germany, and France—in the form of pharmaceutical patents, computer chip designs, and other intellectual property.”⁷² As activist Roberto Verzola laments, “If it is a sin for the poor to steal from the rich, it must be a much bigger sin for the rich to steal from the poor.”⁷³

In sum, intellectual property law has not only created a mismatch with the traditional property model—thereby calling into question the appropriateness of equating intellectual property infringement with

68. See generally *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Daniel F. Robinson, Ahmed Abdel-Latif & Pedro Roffe eds., 2017) (collecting essays that offer detailed analyses of the efforts taken by the Intergovernmental Committee).

69. Press Release, World Intell. Prop. Org., WIPO Member States Approve Diplomatic Conferences for Two Proposed Accords (July 21, 2022) https://www.wipo.int/pressroom/en/articles/2022/article_0009.html [<https://perma.cc/48NV-5ZB7>].

70. See General Comment No. 25, *supra* note 56, ¶ 39 (“Local, traditional and indigenous knowledge . . . [is] precious and ha[s] an important role to play in the global scientific dialogue.”).

71. See generally Glynn S. Lunney, Jr., *Copyright and the 1%*, 23 *Stan. Tech. L. Rev.* 1 (2020) (drawing on data from the PC video game market to show that copyright overpays superstars while offering limited support for the average author and works at the margins of profitability); William Patry, *The Failure of the American Copyright System: Protecting the Idle Rich*, 72 *Notre Dame L. Rev.* 907 (1997) (criticizing the U.S. copyright system for failing to benefit authors and protecting the idle rich).

72. World Bank, *Global Economic Prospects and the Developing Countries 2002: Making Trade Work for the World’s Poor*, at xvii (2001).

73. Roberto Verzola, *Pegging the World’s Biggest “Pirate”*, *Earth Island J.*, Spring 1997, at 41, 41. Taking note of the problems created by colonial legacy, Professor Klaus Beiter asks similarly: “Who is perverse—the African copyright pirate or the situation in which he or she lives?” Beiter, *African Copyright Pirate*, *supra* note 47, at 78 (emphasis omitted).

theft—but it has also created major impediments to public access to educational materials and technologies. To the extent that the public has an inherent right to access these materials and technologies,⁷⁴ which Part II will further discuss in the context of the human right to education, it is not far-fetched to argue that intellectual property law has perpetuated the “theft” of educational opportunities from members of marginalized and disadvantaged communities. The theft label can be used in both directions; such use is not the privilege of intellectual property rights holders and their supportive politicians and industry groups.

C. *Endogenous Reforms*

To reduce the impediments intellectual property law has posed to education, courts, policymakers, and commentators have advanced different reforms. Thus far, critics have been divided over the courses of action needed to address these impediments. While many critics embrace intellectual property reforms inside the property regime, others locate them outside. This section discusses reforms that are endogenous to the regime.

Those critics who have embraced intellectual property reforms inside the property regime underscore the fact that property rights are not absolute but are filled with limitations, safeguards, and obligations.⁷⁵ Examples of these limitations include “adverse possessions, eminent domain, easements, servitudes, nuisance, zoning, irrevocable licenses, the Rule Against Perpetuities, and the waste and public trust doctrines.”⁷⁶ Thus, instead of abandoning property rights, these critics recognize the importance of “taking property rights seriously.”⁷⁷ For instance, in his

74. See generally Klaus Dieter Beiter, *The Protection of the Right to Education by International Law* (2005) [hereinafter Beiter, *Right to Education*] (providing a comprehensive treatise on the right to education).

75. See, e.g., Fisher, *Promises to Keep*, supra note 23, at 140 (“Blackstone’s characterization of a right to land as ‘absolute dominion’ over it was an exaggeration even at the time he wrote, and is surely so today. Every one of a landowner’s rights is subject to important limitations and exceptions.”); Joseph William Singer, *Entitlement: The Paradoxes of Property*, at xii (2000) [hereinafter Singer, *Entitlement*] (“Access to property is . . . a fundamental component of social justice.”); Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 *Duke L.J.* 1, 52–81 (2004) (discussing the limits and defenses in property law); Jacqueline Lipton, *Information Property: Rights and Responsibilities*, 56 *Fla. L. Rev.* 135, 148 (2004) (“Historically, Property rights have never been absolute. They have always involved limitations, often in the form of legal duties owed to others.” (footnote omitted)).

76. Yu, *Information Ecosystems*, supra note 20, at 6; see also Lipton, supra note 75, at 172 (noting among the property owner’s obligations “to maintain the premises in good repair; . . . to allow certain persons access to the Property for particular purposes; . . . to pay taxes when required by the government; and . . . to cede the Property to the government if required”).

77. Fisher, *Promises to Keep*, supra note 23, at 134 (capitalization omitted).

book *Promises to Keep*, Professor William Fisher has devoted an entire chapter to outlining the different limitations and exceptions to property rights that can be used to reform copyright law.⁷⁸ Professor Michael Carrier shows how limits and defenses in property law—in particular, those based on development, necessity, and equity—can be utilized to cabin the fast expansion of intellectual property rights.⁷⁹ Professor Jacqueline Lipton underscores the need to locate affirmative legal duties of information property holders to facilitate competing interests in their property, such as privacy, moral rights, and cultural rights.⁸⁰

Like property law, intellectual property law is filled with limitations and exceptions. Consider, for example, those relating to education. In copyright law, the fair use provision facilitates the use of copyrighted works for educational purposes, especially on a not-for-profit basis.⁸¹ The preamble of section 107 specifically mentions “teaching (including multiple copies for classroom use), scholarship, or research.”⁸² Section 110(1) allows teachers and students to publicly perform or display a copyrighted work “in the course of face-to-face teaching activities of a nonprofit educational institution, in a classroom or similar place devoted to instruction.”⁸³ Section 108 provides limitations and exceptions for libraries and archives.⁸⁴ To facilitate the use of copyrighted works in distance-learning, Congress created new copyright exceptions through the TEACH Act.⁸⁵

In patent law, courts have long held that protection does not extend to “laws of nature, natural phenomena, and abstract ideas.”⁸⁶ They have also recognized research exemptions to patent infringement.⁸⁷ In addition, section 154 limits patent protection to twenty years from the date of application, a duration that is far shorter than the copyright term of the life of the author plus seventy years.⁸⁸ Once the patent expires, the

78. See *id.* at 134–72.

79. See Carrier, *supra* note 75, at 82–144.

80. See Lipton, *supra* note 75, at 165–89.

81. See 17 U.S.C. § 107(1) (2018) (providing a factor for evaluating “the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes”).

82. *Id.* § 107.

83. *Id.* § 110(1).

84. *Id.* § 108.

85. Technology, Education and Copyright Harmonization Act of 2002, Pub. L. No. 107-273, § 13301, 116 Stat. 1758, 1910–13 (codified as amended at 17 U.S.C. §§ 110, 112, 802(c)).

86. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

87. See generally Katherine J. Strandburg, The Research Exemption to Patent Infringement: The Delicate Balance Between Current and Future Technical Progress, *in* 2 *Intellectual Property and Information Wealth*, *supra* note 54, at 107.

88. Compare 35 U.S.C. § 154(a)(2) (2018) (stipulating the duration of patent protection), with 17 U.S.C. § 302 (stipulating the duration of copyright protection).

invention covered will go into the public domain, and the public, in most cases, will have access to the knowledge generated.⁸⁹ After all, a key part of the patent bargain is the disclosure of an invention in exchange for protection for a limited duration.⁹⁰

While limitations and exceptions remain important to addressing the problems posed by intellectual property law, some courts and commentators embrace the introduction of users' rights.⁹¹ Outside the United States, Chief Justice Beverley McLachlin of the Canadian Supreme Court recognized these rights in the copyright context in *CCH Canadian Ltd. v. Law Society of Upper Canada*:

The fair dealing exception, like other exceptions in the *Copyright Act*, is a user's right. In order to maintain the proper balance between the rights of a copyright owner and users' interests, it must not be interpreted restrictively. As Professor [David] Vaver . . . has explained . . . : "User rights are not just loopholes. Both owner rights and user rights should therefore be given the fair and balanced reading that befits remedial legislation."⁹²

The existence of users' rights has since been affirmed in subsequent cases, including five noted copyright decisions in the early 2010s,⁹³ which Canadian legal commentators have dubbed the "Copyright Pentalogy."⁹⁴

Interestingly, the Canadian Supreme Court's position on users' rights has found parallels across the border in the United States. In 1991, before the mainstreaming of the internet, Professors Lyman Ray Patterson and

89. As we have seen from the COVID-19 pandemic, the public may need tacit knowledge even if the patented inventions have entered the public domain or are otherwise unprotected. See Lee, *supra* note 15; Peter K. Yu, *Deferring Intellectual Property Rights in Pandemic Times*, 74 *Hastings L.J.* 489, 548–49 nn.313–314 (2023).

90. See, e.g., *ABS Global, Inc. v. Inguran, LLC*, 914 F.3d 1054, 1070 (7th Cir. 2019) ("A crucial part of the inventor's end of the grand patent bargain is the inventor's full disclosure of the invention."); *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003) ("As part of the *quid pro quo* of the patent bargain, the applicant's specification must enable one of ordinary skill in the art to practice the full scope of the claimed invention.").

91. See generally Pascale Chapdelaine, *Copyright User Rights: Contracts and the Erosion of Property* (2017) (examining the scope of copyright user rights through the lens of property, copyright, and contract law).

92. [2004] 1 S.C.R. 339, para. 48 (Can.) (quoting David Vaver, *Copyright Law* 171 (2000)).

93. See *Re:Sound v. Motion Picture Theatre Ass'ns of Can.*, [2012] 2 S.C.R. 376 (Can.); *Alberta v. Canadian Copyright Licensing Agency*, [2012] 2 S.C.R. 345 (Can.); *Soc'y of Composers, Authors & Music Publishers of Can. v. Bell Can.*, [2012] 2 S.C.R. 326 (Can.); *Rogers Commc'ns Inc. v. Soc'y of Composers, Authors & Music Publishers of Can.*, [2012] 2 S.C.R. 283 (Can.); *Ent. Software Ass'n v. Soc'y of Composers, Authors & Music Publishers of Can.*, [2012] 2 S.C.R. 231 (Can.).

94. See Michael Geist, *Introduction to The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law*, at iii (Michael Geist ed., 2013) ("On 12 July 2012, the Court issued rulings on five copyright cases in a single day, an unprecedented tally that shook the very foundations of copyright law in Canada . . . which were quickly dubbed the 'Copyright Pentalogy' . . .").

Stanley Lindberg published *The Nature of Copyright: A Law of Users' Rights*, which outlined the important rights of copyright users.⁹⁵ A few years later, Judge Stanley Birch recognized those rights in *Bateman v. Mnemonics, Inc.*:

Although the traditional approach is to view “fair use” as an affirmative defense, this writer, speaking only for himself, is of the opinion that it is better viewed as a right granted by the Copyright Act of 1976. Originally, as a judicial doctrine without any statutory basis, fair use was an infringement that was excused—this is presumably why it was treated as a defense. As a statutory doctrine, however, fair use is not an infringement. Thus, since the passage of the 1976 Act, fair use should no longer be considered an infringement to be excused; instead, it is logical to view fair use as a right. Regardless of how fair use is viewed, it is clear that the burden of proving fair use is always on the putative infringer.⁹⁶

In the book Professor Patterson and Judge Birch were writing before the former's passing, the authors provocatively explained why copyright should be viewed as an easement: “[C]opyright makes the most sense when viewed as a temporary marketing easement in material taken from the public domain, which leaves room for an easement of use by those to whom copies of the works are marketed.”⁹⁷

Whether in the intellectual property field or beyond, framing limitations and exceptions as rights has important benefits. As Professor Mary Ann Glendon explains, “rights talk” provides rhetorical power and helps generate a sense of absoluteness.⁹⁸ Likewise, Professor Laura Underkuffler observes: “A declaration of right clothes an interest with awesome rhetorical, political, and legal power. ‘I have a right’ is a challenge to the world; my interest, which I assert, is—presumptively, at least—superior to all non-rights interests with which it may conflict.”⁹⁹

95. L. Ray Patterson & Stanley W. Lindberg, *The Nature of Copyright: A Law of Users' Rights* 191–222 (1991).

96. 79 F.3d 1532, 1542 n.22 (11th Cir. 1996).

97. L. Ray Patterson & Stanley F. Birch, Jr., *A Unified Theory of Copyright* (Craig Joyce ed., 2009), in 46 *Hous. L. Rev.* 215, 237 (2009). Other commentators have made similar claims. See Alexander Peukert, *Fictitious Commodities: A Theory of Intellectual Property Inspired by Karl Polanyi's “Great Transformation”*, 29 *Fordham Intell. Prop. Media & Ent. L.J.* 1151, 1194 (2019) (“[T]he *Grundnorm* of the [intellectual property] system . . . is not ownership as in real property but non-ownership.”); David Vaver, *User Rights: Fair Use and Beyond*, 68 *J. Copyright Soc'y U.S.A.* 337, 339 (2021) (“Could not copyright itself plausibly be the exception, and freedom the rule? . . . Can copyright not be viewed as an island in a sea of user rights: the land stops where the sea begins?”).

98. Glendon, *Rights Talk*, supra note 37, at 14; see also Lisa Forman, “Rights” and Wrongs: What Utility for the Right to Health in Reforming Trade Rules on Medicines?, 10 *Health & Hum. Rts.*, no. 2, 2008, at 37, 45 (“Rights-based discourse, litigation, and action appear to have played significant roles in shifting policy, price, and perception around AIDS medicines.”).

99. Laura S. Underkuffler, *The Idea of Property: Its Meaning and Power* 65 (2003).

More specifically in the copyright context, Professor Abraham Drassinower declares: “[A]s soon as fair dealing is a matter of right, we can no longer regard substantial reproduction as wrongful per se. The defendant’s unauthorized copying arises not as a mere exception but under the rubric of right.”¹⁰⁰

Notwithstanding the rhetorical power generated by users’ rights, right-based rhetoric could harm society by “obscur[ing] the public interests, social values, and relationships that should inform copyright’s development in the digital age.”¹⁰¹ As Professor Carys Craig explained: “[T]he escalation of rights rhetoric in the copyright debate threatens to compound rather than to contest the moral or proprietary claims to right made o[n] behalf of copyright owners. The concept of ‘user rights,’ then, is potentially a double-edged sword that should be wielded carefully if public interest advocates are to avoid a self-inflicted injury.”¹⁰² Moreover, as Professor Glendon warns more generally, “A tendency to frame nearly every social controversy in terms of a clash of rights . . . impedes compromise, mutual understanding, and the discovery of common ground.”¹⁰³ Right-based rhetoric could therefore be counterproductive.

Finally, some commentators have explored the possibility of using other property models to improve the intellectual property system. Although the current system¹⁰⁴ resonates with those embracing a property model that emphasizes the protection of exclusive rights,¹⁰⁵ many property models exist. Some models are also better than others at reconciling the differences between tangible and intangible property and addressing the shortcomings of the existing intellectual property system.

Taking seriously the critique that the current system does not enable Indigenous communities to secure greater protection for their cultural

100. Abraham Drassinower, *Subject Matter, Scope, and User Rights in Copyright Law*, 67 *Stud. L. Pol. & Soc’y* 59, 64 (2015); see also David Vaver, *Copyright Defenses as User Rights*, 60 *J. Copyright Soc’y U.S.A.* 661, 669 (2013) (“The idea that users have rights just as owners do and that users are equals whose rights deserve the same respect as owners’ rights is of course anathema to copyright holders and those who act for them.”).

101. Carys J. Craig, *Globalizing User Rights-Talk: On Copyright Limits and Rhetorical Risks*, 33 *Am. U. Int’l L. Rev.* 1, 8 (2017).

102. *Id.* at 8–9.

103. Glendon, *Rights Talk*, *supra* note 37, at xi.

104. See 17 U.S.C. § 106 (2018) (listing the exclusive rights in copyrighted works); 35 U.S.C. § 154 (2018) (“Every patent shall contain . . . a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States . . .”). See generally Adam Mossoff, *Exclusion and Exclusive Use in Patent Law*, 22 *Harv. J.L. & Tech.* 321 (2009).

105. See generally Thomas W. Merrill, *Property and the Right to Exclude*, 77 *Neb. L. Rev.* 730 (1998) (arguing that the right to exclude is the sine qua non of property); Thomas W. Merrill, *Property and the Right to Exclude II*, 3 *Brigham-Kanner Prop. Rts. Conf. J.* 1 (2014) (revisiting and clarifying the exclusion thesis advanced in the earlier article).

heritage, Professors Kristen Carpenter, Sonia Katyal, and Angela Riley advanced a property model based on the stewardship paradigm.¹⁰⁶ As they explain, it is not that property rights have created problems for the protection of Indigenous cultural heritage, but rather that the undue focus on ownership and the rights to exclude, develop, and transfer has made the traditional property model undesirable.¹⁰⁷ A property model based on the stewardship paradigm will take better account of the Indigenous communities' collective obligations toward land and resources:

The stewardship model captures . . . the fiduciary or custodial duties exercised by tribes in the absence of title and ownership. It also explains why a number of key “sticks” in the proverbial bundle of property rights—rights of use, representation, access, and production—can be exercised by nonowners in the context of tangible and intangible properties.¹⁰⁸

Unlike the first group of critics, some commentators have moved away from exclusive rights to governance—a choice with which property scholars are familiar.¹⁰⁹ For instance, intellectual property scholars have discussed or advocated the use of regulatory approaches to strike a more appropriate balance between proprietary control and public access.¹¹⁰ Some legal and economic scholars have also extolled the benefits of using commons or other alternative models to govern property,¹¹¹ including

106. See generally Kristen A. Carpenter, Sonia K. Katyal & Angela R. Riley, In Defense of Property, 118 *Yale L.J.* 1022 (2009) (advancing a stewardship model of property to justify the protections for Indigenous peoples' cultural property).

107. See *id.* at 1027. As the authors declare:

The classic view of property law focuses on the predictability and certainty of protecting the individual owner's rights of exclusion and alienation primarily for wealth-maximization purposes. Yet a more relational vision of property law honors the legitimate interests of both owners and nonowners, in furtherance of various human and social values, potentially including nonmarket values.

Id. (footnotes omitted).

108. *Id.* at 1124–25.

109. See Henry E. Smith, Exclusion Versus Governance: Two Strategies for Delineating Property Rights, 31 *J. Legal Stud.* S453, S455 (2002) (“[E]xclusion and governance are strategies that are at the poles of a continuum of methods of measurement, which we can add to the more familiar continuum from private property through the commons to open access.”).

110. See generally Shubha Ghosh, Patents and the Regulatory State: Rethinking the Patent Bargain Metaphor After *Eldred*, 19 *Berkeley Tech. L.J.* 1315 (2004) (advancing a theory of patent rights that views those rights as a means to regulate primary conduct in the innovation process); Joseph P. Liu, Regulatory Copyright, 83 *N.C. L. Rev.* 87 (2004) (emphasizing the regulatory aspects of copyright law).

111. See, e.g., Steven N.S. Cheung, The Structure of a Contract and the Theory of a Non-Exclusive Resource, 13 *J.L. & Econ.* 49, 50–54 (1970) (discussing how contractual stipulations can help facilitate the non-exclusive use of common resources); Carol M. Rose,

property in knowledge-based goods and services.¹¹² In the past decade, Professors Brett Frischmann, Michael Madison, and Katherine Strandburg have devoted considerable effort to improving our understanding of how knowledge commons are to be governed.¹¹³

In sum, even if one chooses to stay inside the property regime, many possible reforms exist to improve intellectual property law. If the property aspects of intellectual property rights are to be emphasized, those making such emphasis should recognize the limitations and exceptions in the property regime. They should also actively consider the choice of property models. As Professors Gregory Alexander and Eduardo Peñalver observe: “At the base of every single property debate are competing theories of property—different understandings of what private property is, why we have it, and what its proper limitations are.”¹¹⁴ In his book on the property aspects of intellectual property, Professor Ole-Andreas Rognstad warns readers up front about the challenges posed by diverging property traditions across the world.¹¹⁵

D. *Exogenous Reforms*

Not all critics of intellectual property law have embraced reforms inside the property regime. Many of those who rejected endogenous

Rethinking Environmental Controls: Management Strategies for Common Resources, 1991 Duke L.J. 1, 8–12 (outlining four strategies of commons management).

112. These works often draw on the foundational work of political scientist Elinor Ostrom. See generally Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (1990) (providing the foundational work on how to solve common pool resource problems); *Understanding Knowledge as a Commons*, supra note 22 (collecting essays that discuss the importance of treating knowledge as a commons). In addition to commons, commentators have also considered semicommons. See, e.g., James Grimmelmann, *The Internet Is a Semicommons*, 78 *Fordham L. Rev.* 2799, 2799–800 (2010) (considering the internet a striking example of a semicommons, based on the fact that “[i]t mixes private property in individual computers and network links with a commons in the communications that flow through the network”); Robert A. Heverly, *The Information Semicommons*, 18 *Berkeley Tech. L.J.* 1127, 1161–88 (2003) (explaining why information ownership should be viewed as a semicommons).

113. See, e.g., *Governing Knowledge Commons* (Brett M. Frischmann, Michael J. Madison & Katherine J. Strandburg eds., 2014); *Governing Medical Knowledge Commons* (Katherine J. Strandburg, Brett M. Frischmann & Michael J. Madison eds., 2017); *Governing Smart Cities as Knowledge Commons* (Brett M. Frischmann, Michael J. Madison & Madelyn Rose Sanfilippo eds., 2023).

114. Gregory S. Alexander & Eduardo M. Peñalver, *An Introduction to Property Theory*, at xi (2012). For discussions of the notion of property and its place in society and the legal system, see generally J.E. Penner, *The Idea of Property in Law* (1997); Jedediah Purdy, *The Meaning of Property: Freedom, Community, and the Legal Imagination* (2010); Underkuffler, supra note 99; Jeremy Waldron, *What Is Private Property?*, 5 *Oxford J. Legal Stud.* 313 (1985).

115. See Ole-Andreas Rognstad, *Property Aspects of Intellectual Property* 3–6 (2018).

reforms have also emphasized the law's regulatory or welfarist aspects.¹¹⁶ For illustrative purposes, this section highlights several reforms exogenous to the property regime.

Some of those advocating for exogenous reforms are eager to identify the external limits to intellectual property rights found in other areas, such as human rights, free speech, privacy, or antitrust law.¹¹⁷ Unlike the users' rights mentioned in the previous section, the rights used to maintain these external limits reside outside intellectual property law. As such, they can provide a powerful countervailing force to help foster a more appropriate balance in the intellectual property system. Nevertheless, as shown in copyright infringement cases invoking the First Amendment defense, courts do not always recognize external limits as an independent counterbalancing tool. Instead, they point out that the intellectual property system has already internalized those limits in the form of built-in safeguards, limitations, and exceptions.¹¹⁸

A notable example of the use of external limits, which Part II will further discuss, is the assertion of the human right to education.¹¹⁹ When using human rights to cabin the excesses of intellectual property law, human rights bodies, judges, and commentators often apply the principle of human rights primacy to ensure that human rights will prevail over intellectual property rights.¹²⁰ Recognizing this hierarchy is unsurprising considering the key distinctions between these two sets of rights. As the CESCR declares in an authoritative interpretive comment:

116. See, e.g., Peter Drahos, *A Philosophy of Intellectual Property* 213 (1996) (characterizing the intellectual property right as "a state-based, rule-governed privilege [that] interfere[s] in the negative liberties of others"); Tom W. Bell, *Authors' Welfare: Copyright as a Statutory Mechanism for Redistributing Rights*, 69 *Brook. L. Rev.* 229, 231 (2003) ("[L]awmakers should apply to the 'authors' welfare' program embodied in U.S. copyright law reforms like those recently applied to U.S. social welfare programs."); Ghosh, *supra* note 110, at 1317 ("[P]atent law should be viewed as a form of regulation integrated into other activities of the modern regulatory state."); Herbert Hovenkamp, *Antitrust and the Regulatory Enterprise*, 2004 *Colum. Bus. L. Rev.* 335, 336 ("Anyone who does not believe that the [intellectual property] laws are a form of regulation has not read the Patent, Lanham, or Copyright Acts and the maze of technical rules promulgated under them.").

117. See Peter K. Yu, *The International Enclosure Movement*, 82 *Ind. L.J.* 827, 904–06 (2007) (discussing the importance of exogenous limits to intellectual property protection).

118. See *Eldred v. Ashcroft*, 537 U.S. 186, 219–21 (2003) (underscoring the various "built-in First Amendment accommodations" in existing copyright law); see also *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985) ("[I]t should not be forgotten that the Framers intended copyright itself to be the engine of free expression."). But see Peter K. Yu, *The Confuzzling Rhetoric Against New Copyright Exceptions*, in 1 *Kritika: Essays on Intellectual Property* 278, 298–303 (Peter Drahos, Gustavo Ghidini & Hanns Ullrich eds., 2015) (discussing the misreading of *Eldred* and *Harper & Row* in relation to the Supreme Court's views on conflicts between copyright and free speech).

119. See *infra* Part II.

120. See Yu, *Reconceptualizing Intellectual Property Interests*, *supra* note 17, at 1092–93 (discussing the principle of human rights primacy).

Human rights are fundamental as they are inherent to the human person as such, whereas intellectual property rights are first and foremost means by which States seek to provide incentives for inventiveness and creativity, encourage the dissemination of creative and innovative productions, as well as the development of cultural identities, and preserve the integrity of scientific, literary and artistic productions for the benefit of society as a whole.¹²¹

In the domestic context, one could also consider arguments backed by civil rights.¹²² As the United States Supreme Court declared in no uncertain terms in *Brown v. Board of Education*, “[T]he opportunity of an education . . . , where the state has undertaken to provide it, is a right which must be made available to all on equal terms.”¹²³ Title VI of the Civil Rights Act of 1964 further prohibits discrimination based on race, color, or national origin in federally assisted programs, including those relating to education.¹²⁴ In the past few decades, commentators have also called for greater protection of the right to education as a constitutional matter—at both the federal and state levels.¹²⁵ Nevertheless, these efforts still have not

121. Comm. on Econ., Soc. & Cultural Rts., General Comment No. 17, The Right of Everyone to Benefit From the Protection of the Moral and Material Interests Resulting From Any Scientific, Literary or Artistic Production of Which He or She Is the Author (Article 15, Paragraph 1(c), of the Covenant), ¶ 1, U.N. Doc. E/C.12/GC/17 (Jan. 12, 2006) [hereinafter General Comment No. 17].

122. See, e.g., Dalié Jiménez & Jonathan D. Glater, Student Debt Is a Civil Rights Issue: The Case for Debt Relief and Higher Education Reform, 55 Harv. C.R.-C.L. L. Rev. 131 (2020) (arguing that the disparate impact of student debt on minorities should be viewed as a civil rights issue).

123. 347 U.S. 483, 493 (1952).

124. Title VI of the Civil Rights Act of 1964, Pub. L. No. 88-352, § 601, 78 Stat. 241, 252; see also Jiménez & Glater, *supra* note 122, at 161 (“Equal access to education opportunity is a civil right.”).

125. See, e.g., Susan H. Bitensky, Theoretical Foundations for a Right to Education Under the U.S. Constitution: A Beginning to the End of the National Education Crisis, 86 Nw. U. L. Rev. 550, 553 (1992) (“[The right to education] may be found implicitly to arise from the Fourteenth Amendment’s Due Process Clause and Privileges or Immunities Clause, the First Amendment’s Free Speech Clause, and from another implied constitutional right, the right to vote.” (footnotes omitted)); Derek W. Black, The Fundamental Right to Education, 94 Notre Dame L. Rev. 1059, 1063 (2019) (“[F]rom the United States’ founding principles to the final ratification of the Fourteenth Amendment itself, education has always been understood as a fundamental right. . . . Congress directly linked the ratification . . . to Southern states’ readmission to the Union, as well as to new commitments in their state constitutions to provide education.”); Areto A. Imoukhuede, Enforcing the Right to Public Education, 72 Ark. L. Rev. 443, 465 (2019) (“Despite the failure of the U.S. Supreme Court to recognize education as a U.S. constitutional right, each state has recognized it as a fundamental right under their state constitutions.”). See generally Matthew Patrick Shaw, The Public Right to Education, 89 U. Chi. L. Rev. 1179 (2022) (advocating the treatment of public education as a property interest protected by due process).

created a right to education that is robust enough to greatly improve public access to education.¹²⁶

Unlike those critics who seek to locate external limits to intellectual property rights, some commentators have called for the development of alternative incentive frameworks to support creators and inventors.¹²⁷ These frameworks lie mostly outside the intellectual property system, do not always depend on property entitlements, and are often delinked from the market.¹²⁸ Examples in the patent area are “grants, subsidies, prizes, advance market commitments, reputation gains, [and] open source drug discovery.”¹²⁹ In the past two decades, commentators have also advanced the “IP without IP” model—which stands for “intellectual production without intellectual property.”¹³⁰ Focusing on negative spaces in the intellectual property area and relying on social norms, this model underscores the possibility of promoting creativity and innovation without creating property entitlements.¹³¹

Finally, many intellectual property users have become so disillusioned with intellectual property law that they simply ignore the law, creating the phenomenon of “property disobedience” that Professors Peñalver and Katyal have captured well in their book *Property Outlaws*.¹³² As they observe: “[I]ntentional lawbreaking is typically (though not always) a tool of the have-nots. And in many cases, . . . an initial transgression of a property entitlement is an essential event in provoking a shift in the law.”¹³³ A case

126. See Rachel F. Moran, *Personhood, Property, and Public Education: The Case of Plyler v. Doe*, 123 *Colum. L. Rev.* 1271, 1322–24 (2023).

127. See generally Gene Patents and Collaborative Licensing Models: Patent Pools, Clearinghouses, Open Source Models and Liability Regimes (Geertrui Van Overwalle ed., 2009) (collecting essays that discuss patent pools, clearinghouses, open source models, and liability regimes); Incentives for Global Public Health: Patent Law and Access to Essential Medicines 133–283 (Thomas Pogge, Matthew Rimmer & Kim Rubenstein eds., 2010) (collecting essays that discuss prizes, patent pools, and open source drug discovery).

128. See General Comment No. 25, *supra* note 56, ¶ 62 (calling for the development of alternative incentives “which delink remuneration of successful research from future sales”); Farida Shaheed (Special Rapporteur in the Field of Cultural Rights), *Cultural Rights*, ¶ 57, U.N. Doc. A/70/279 (Aug. 4, 2015) [hereinafter Special Rapporteur’s Report on Patent Policy] (considering as a key advantage of alternative funding mechanisms their ability to “be tied to social benefit rather than market demand”).

129. Yu, *Anatomy*, *supra* note 17, at 63.

130. See Rochelle Cooper Dreyfuss, *Does IP Need IP? Accommodating Intellectual Production Outside the Intellectual Property Paradigm*, 31 *Cardozo L. Rev.* 1437, 1437 n.* (2010) (crediting Professor Mario Biagioli for coining the term); Amy Kapczynski, *Order Without Intellectual Property Law: Open Science in Influenza*, 102 *Cornell L. Rev.* 1539, 1543 n.20 (2017) (crediting Professor Rochelle Dreyfuss for making salient the term).

131. See Peter K. Yu, *A Half-Century of Scholarship on the Chinese Intellectual Property System*, 67 *Am. U. L. Rev.* 1045, 1137 n.370 (2018) (collecting sources that discuss the “IP without IP” model).

132. Peñalver & Katyal, *supra* note 32, at 7.

133. *Id.* at 14.

in point is the repeat file-sharing conducted by internet users in the United States and other parts of the world,¹³⁴ which eventually sparked the development of new business models and the introduction of new copyright laws.¹³⁵ Interestingly, even though the copyright industries have repeatedly complained about file-sharing and the resulting economic loss, some rights holders appear to have openly tolerated such activities—sometimes begrudgingly and at other times willingly due in part to the infringing activities’ potential upsides.¹³⁶

When all the proposed endogenous and exogenous reforms are taken together, it is not difficult to see the continuous disagreement among courts, policymakers, and commentators over whether intellectual property reforms should be undertaken inside or outside the property regime. These reforms also reveal the lack of consensus over whether intellectual property rights are property rights. Regardless of one’s position on these two debates, both the endogenous and exogenous reforms have underscored the alarming impediments posed by intellectual property law to public access to education. If policymakers are to improve such access, they will need to introduce intellectual property reforms—whether inside or outside the property regime.

II. HUMAN RIGHTS

The previous Part has shown that commentators advancing intellectual property reforms both inside and outside the property regime have called for the introduction of positive rights to foster public access to education. To help evaluate the effectiveness and limitations of this key line of reform, this Part turns to the human rights forum, which is accustomed to clashes between competing interests cloaked in rights. Although a greater exploration of the debate on property and education in the human rights context can enrich our understanding of that debate in the intellectual property context, such exploration can also provide important insights into the phenomenon surrounding so-called “education theft.” This Part begins by making a case why policymakers and

134. See, e.g., Elec. Frontier Found., *RIAA v. The People: Five Years Later 1–9* (2008), <https://www.eff.org/files/eff-riaa-whitepaper.pdf> [<https://perma.cc/A3EF-ZXSS>] (discussing the first five years of the litigation campaign pursued by the Recording Industry Association of America (RIAA)); Peter K. Yu, *P2P and the Future of Private Copying*, 76 *U. Colo. L. Rev.* 653, 663–70 (2005) [hereinafter Yu, *P2P and the Future*] (discussing the first wave of lawsuits the RIAA filed against individual file-sharers).

135. See Yu, *P2P and the Future*, *supra* note 134, at 669 (discussing the launch of the iTunes Music Store in response to rampant file-sharing and RIAA’s lawsuits).

136. See generally Tim Wu, *Tolerated Use*, 31 *Colum. J.L. & Arts* 617, 619 (2008) (“Tolerated use is infringing usage of a copyrighted work of which the copyright owner may be aware, yet does nothing about [R]easons for tolerating use . . . can include . . . a calculation that the infringement creates an economic complement to the copyrighted work—it actually benefits the owner.”).

commentators should pay greater attention to the debate on property and education in the human rights context and link this debate to debates on property and education in other contexts. It then discusses how human rights bodies and commentators have resolved the tensions and conflicts between the right to education and the right to the protection of the interests resulting from intellectual productions, a right specially named to highlight its coverage of only the human rights aspects of intellectual property rights.¹³⁷

A. Need for Greater Linkage

The developments in the human rights forum are important to the debate on property and education for five reasons. First, they show that the tensions between property and education exist in many different contexts. While the intellectual property issues discussed in Part I are important because intellectual property law can both incentivize the creation of educational materials and technologies and impede public access to them,¹³⁸ the human rights issues are equally important because the right to education can be asserted to foster greater public access to education. Indeed, as the previous Part has noted, some commentators have called for greater protection of the right to education as a civil or constitutional right,¹³⁹ similarly to how international and regional human rights instruments recognize that right.¹⁴⁰ A deeper understanding of developments in the human rights forum will therefore enrich our ability to strengthen the protection of the right to education in the civil or constitutional right context, and vice versa.

Second, the efforts to address the tensions between property and education in the human rights forum will reveal helpful techniques used by human rights bodies and commentators. Studying these efforts will also enable one to evaluate the effectiveness and limitations of a key line of reform advanced by courts, policymakers, and commentators both inside and outside the property regime to improve public access to education—namely, the introduction of positive rights to foster such access. Overall, the developments in the human rights forum will make clear that compromises are sometimes inevitable when two sets of competing interests collide.¹⁴¹ These developments will also provoke policymakers

137. See *infra* text accompanying notes 173–178.

138. See *supra* section I.B.

139. See *supra* text accompanying notes 122–126.

140. See *infra* section II.B.

141. See Frank I. Michelman, The Annual John Randolph Tucker Lecture: Property as a Constitutional Right, 38 Wash. & Lee L. Rev. 1097, 1110 (1981) (“[I]t is possibility of partial resolutions that allows us to experience the contradiction as generative tension rather than as dead end.”); Peter K. Yu, Intellectual Property Paradoxes in Pandemic Times, 71 GRUR Int’l 293, 294 (2022) (noting the difficult policy choices during the COVID-19 pandemic that came with both major benefits and significant drawbacks).

and commentators to think more about the possibility for additional reforms—whether alternative or complementary.

Third, the human rights forum provides a neutral venue for engaging the debate on property and education—one that is not constrained by any specific property model. Even though the Universal Declaration of Human Rights (“UDHR”) includes a provision on the right to property,¹⁴² this provision does not guarantee the protection of private property.¹⁴³ Instead, article 17(1) merely states that “[e]veryone has the right to own property alone *as well as in association with others*.”¹⁴⁴ Reduced to “a high level of generality,”¹⁴⁵ the chosen language suggests the possibility of having different types of ownership and modalities of protection. It also reflects the fact that the UDHR was drafted by delegates who subscribed to a wide range of political preferences, philosophical backgrounds, and cultural and religious beliefs.¹⁴⁶ Due to Cold War politics and concerns raised by socialist countries, the drafters of the two international covenants that sought to turn the UDHR commitments into enforceable international legal obligations¹⁴⁷ consciously omitted the right-to-property provision.¹⁴⁸ The human rights forum therefore provides a unique venue for exploring how to utilize or adjust property rights to promote public access to education.

Fourth, even though the foundational international human rights instruments either left the right-to-property provision abstract and

142. G.A. Res. 217 (III) A, Universal Declaration of Human Rights art. 17 (Dec. 10, 1948) [hereinafter UDHR]. The provision is also included in regional human rights instruments. See, e.g., Organization of American States, OEA/Ser. L./V./II.23, doc. 21 rev. 6, American Declaration of the Rights and Duties of Man art. 23 (May 2, 1948) (“Every person has a right to own such private property as meets the essential needs of decent living and helps to maintain the dignity of the individual and of the home.”).

143. See Yu, *Anatomy*, supra note 17, at 92–95.

144. UDHR, supra note 142, art. 17 (emphasis added); see also Glendon, *Rights Talk*, supra note 37, at 182 (noting the disagreements between the United States, the United Kingdom, and Latin American and Eastern bloc countries); Yu, *Anatomy*, supra note 17, at 93 (noting the “concerns similar to those raised by the Soviet Union and other Eastern bloc countries during the drafting of the [International Covenant on Economic, Social and Cultural Rights] as well as a strong push by Latin American countries during the drafting of the UDHR”). See generally Johannes Morsink, *The Universal Declaration of Human Rights: Origins, Drafting, and Intent* 139–52 (1999) (discussing the drafting of the right-to-property provision).

145. Mary Ann Glendon, *A World Made New: Eleanor Roosevelt and the Universal Declaration of Human Rights* 183 (2001).

146. See Yu, *Reconceptualizing Intellectual Property Interests*, supra note 17, at 1143–44 (noting the UDHR drafters’ diverse cultural and religious backgrounds).

147. G.A. Res. 2200A (XXI), International Covenant on Civil and Political Rights (Dec. 16, 1966); G.A. Res. 2200A (XXI), International Covenant on Economic, Social and Cultural Rights (Dec. 16, 1966) [hereinafter ICESCR].

148. See Yu, *Reconceptualizing Intellectual Property Interests*, supra note 17, at 1085 & n.179.

ambiguous or omitted it in entirety, there remains a special connection between property rights and human rights in some quarters of the human rights community.¹⁴⁹ Language relating to property rights has also featured more prominently in later international human rights instruments.¹⁵⁰ A case in point is article 31(1) of the United Nations Declaration on the Rights of Indigenous Peoples, which states that “Indigenous peoples . . . have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.”¹⁵¹ In addition, like human rights scholars, property scholars have embraced¹⁵² the human capabilities or human flourishing approaches developed by Professors Martha Nussbaum and Amartya Sen.¹⁵³ There is also a voluminous literature linking property rights to liberty,¹⁵⁴ personhood,¹⁵⁵ and social morality,¹⁵⁶ not to mention the New Jersey Supreme Court’s apt reminder in *State v. Shack* that “[p]roperty rights serve human values.”¹⁵⁷ Thus, to the extent that policymakers and commentators are eager to make the property regime more human-centered or people-centered, human rights will have an important role to play.

Finally, the discussion of the right to education includes a strong critique on the increased commodification of education, which will be highly valuable to the debate on so-called “education theft.”¹⁵⁸ As Professor Klaus Beiter, the author of a noted treatise on the right to

149. See, e.g., C.B. Macpherson, *Human Rights as Property Rights, Dissent*, Winter 1997, at 72, 77 (advocating the treatment of “the right to a quality of life” as a property right, as opposed to “a human right separate from the property right”).

150. See Yu, *Anatomy*, supra note 17, at 92 n.226.

151. G.A. Res. 61/295, United Nations Declaration on the Rights of Indigenous Peoples art. 31(1) (Sept. 13, 2007).

152. See infra section III.C. Intellectual property scholars have embraced similar approaches. See generally Madhavi Sunder, *From Goods to a Good Life: Intellectual Property and Global Justice* (2012); Madhavi Sunder, *IP³*, 59 *Stan. L. Rev.* 257 (2006).

153. See generally Martha C. Nussbaum, *Creating Capabilities: The Human Development Approach* (2011); Martha C. Nussbaum, *Women and Human Development: The Capabilities Approach* (2000); Amartya Sen, *Development as Freedom* 87–110 (1999).

154. See generally Hanoch Dagan, *A Liberal Theory of Property* (2021) (discussing how property advances society’s commitment to individual autonomy and facilitates individual and collective self-determination).

155. See generally Margaret Jane Radin, *Reinterpreting Property* (1993) (collecting essays that advance the liberal personality theory of property); Margaret Jane Radin, *Property and Personhood*, 34 *Stan. L. Rev.* 957 (1982) (exploring the relationship between property and personhood).

156. See generally Peter M. Gerhart, *Property Law and Social Morality* (2014) (advancing a theory that links property to social obligations and morality); Carol M. Rose, *The Moral Subject of Property*, 48 *Wm. & Mary L. Rev.* 1897 (2007) (exploring and responding to moral objections to the institution of property).

157. 277 A.2d 369, 372 (N.J. 1971).

158. See infra Part III.

education, declares: “A general commercialisation of education would contradict the idea that education is a human right, requiring states to fund a system of public schools, which is devoted to free education of a high quality.”¹⁵⁹ In relation to the growing effort to liberalize trade in the education sector, the Right to Education Project also warned, “[A] conceptual shift towards characterizing education as a ‘property right’ may be a precursor to the subjecting of all education—including compulsory education—to liberalization pressures.”¹⁶⁰ There is a reason why article 26 of the UDHR, which covers the right to education, states explicitly that “[e]ducation shall be free, at least in the elementary and fundamental stages.”¹⁶¹ These critiques on the increased commodification of education will offer an important contribution to the debate on so-called “education theft,” which seeks to convert education from a public good into a transferable private commodity.¹⁶² They also provide an important reminder that knowledge is a global public good.¹⁶³

In sum, there are many reasons why policymakers and commentators interested in the debate on property and education should pay greater attention to developments in the human rights forum. A greater understanding of the debate on property and education in the human rights context will help foster crossfertilization between developments in the human rights area and those in other areas.¹⁶⁴ For the purpose of this Essay, the discussion of human-rights-related developments can also provide new insights into the phenomenon surrounding so-called “education theft.” These insights can build on the insights gleaned from the earlier discussion of developments in the intellectual property forum.¹⁶⁵

159. Beiter, *Right to Education*, supra note 74, at 611; see also Klaus D. Beiter, *Why Neoliberal Ideology, Privatisation, and Other Challenges Make a Reframing of the Right to Education in International Law Necessary*, 27 *Int'l J. Hum. Rts.* 425, 445–53 (2023) (criticizing the widespread privatization of education and calling for a reframing of the right to education).

160. Beiter, *Right to Education*, supra note 74, at 611.

161. UDHR, supra note 142, art. 26.1.

162. See Baldwin Clark, *Education as Property*, supra note 2, at 410–12 (discussing education as transferable).

163. See generally Stiglitz, supra note 22 (discussing knowledge as a global public good).

164. Cf. Cynthia M. Ho, *A Collision Course Between TRIPS Flexibilities and Investor-State Proceedings*, 6 *U.C. Irvine L. Rev.* 395, 464 (2016) (“[I]ncreased awareness and cross-fertilization in the investment arena of TRIPS norms would be desirable.”); Peter K. Yu, *Crossfertilizing ISDS with TRIPS*, 49 *Loy. U. Chi. L.J.* 321, 347–49 (2017) (discussing the benefits of crossfertilizing investor–state dispute settlement with the WTO dispute settlement process).

165. See supra Part I.

B. *Intellectual Property and Human Rights*

In the human rights regime, the right to education is protected in article 26 of the UDHR,¹⁶⁶ articles 13 and 14 of the International Covenant on Economic, Social and Cultural Rights (“ICESCR”),¹⁶⁷ and article 28 of the Convention on the Rights of the Child.¹⁶⁸ As the CESCR declares in its interpretive comment:

Education is both a human right in itself and an indispensable means of realizing other human rights. As an empowerment right, education is the primary vehicle by which economically and socially marginalized adults and children can lift themselves out of poverty and obtain the means to participate fully in their communities. Education has a vital role in empowering women, safeguarding children from exploitative and hazardous labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and controlling population growth.¹⁶⁹

Because education directly affects the ability of individuals to fully realize themselves,¹⁷⁰ impeded public access to education has greatly troubled those embracing the human capabilities or human flourishing approaches, whether they focus on human rights or property rights.

Like the right to education, the right to the protection of the interests resulting from intellectual productions is recognized in both the UDHR and the ICESCR. Article 27(2) of the UDHR states: “Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he [or she] is the author.”¹⁷¹ Adopted about two decades later, article 15(1)(c) of the ICESCR closely tracks this language.¹⁷² Although these two instruments recognize the right to the protection of interests resulting from intellectual productions, it is important not to confuse this carefully

166. UDHR, supra note 142, art. 26.

167. ICESCR, supra note 147, arts. 13–14.

168. Convention on the Rights of the Child art. 28, Nov. 20, 1989, 28 I.L.M. 1448. The United States signed the ICESCR and the Convention on the Rights of the Child in 1977 and 1995, respectively, but has not ratified either instrument. Status of Ratification Interactive Dashboard, Off. High Comm’r for Hum. Rts., <https://indicators.ohchr.org/> (select “United States of America” from the menu of countries) (on file with the *Columbia Law Review*) (last visited Mar. 18, 2023).

169. General Comment No. 13, supra note 50, ¶ 1.

170. See Laurence R. Helfer & Graeme W. Austin, *Human Rights and Intellectual Property: Mapping the Global Interface* 322 (2011) (discussing the connection between education and the idea of self-realization).

171. UDHR, supra note 142, art. 27(2).

172. ICESCR, supra note 147, art. 15(1)(c) (requiring state parties to “recognize the right of everyone . . . [t]o benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he [or she] is the author”).

crafted and universally recognized right with intellectual property rights discussed in Part I.¹⁷³ The former covers only the human rights aspects of the latter.

When tensions arose between the right to education and the right to the protection of interests resulting from intellectual productions, many in the human rights community had a natural impulse to apply the principle of human rights primacy to ensure that the former would prevail over the latter.¹⁷⁴ Generally referred to as the “conflict approach,” this approach was widely used until about a decade ago.¹⁷⁵ In recent years, however, many human rights bodies and commentators have recognized the complexities in the tensions and conflicts between intellectual property and human rights. Because the UDHR and the ICESCR protect both the right to education and the right to the protection of interests resulting from intellectual productions,¹⁷⁶ the tensions and conflicts between these two competing human rights have precipitated a true conflict within the human rights regime.¹⁷⁷ Instead of putting the right to education at a higher level of the hierarchy, this conflict readily acknowledges that “some aspects of intellectual property rights are recognized as human rights while the other aspects do not have any human rights basis.”¹⁷⁸

Thus far, human rights bodies and commentators have identified different techniques, approaches, and solutions to alleviate the tensions and conflicts between competing human rights. For instance, state parties seeking to discharge their obligations to protect the right to education could issue human-rights-based compulsory licenses,¹⁷⁹ which would allow

173. See General Comment No. 17, *supra* note 121, ¶ 3 (“It is . . . important not to equate intellectual property rights with the human right recognized in article 15, paragraph 1(c).”).

174. See *supra* text accompanying notes 120–121.

175. See Laurence R. Helfer, *Human Rights and Intellectual Property: Conflict or Coexistence?*, 5 *Minn. Intell. Prop. Rev.* 47, 48–49 (2003) (discussing the conflict and coexistence approaches); Peter K. Yu, *Ten Common Questions About Intellectual Property and Human Rights*, 23 *Ga. St. U. L. Rev.* 709, 709–11, 716 (2007) (same).

176. ICESCR, *supra* note 147, art. 15(1)(c); UDHR, *supra* note 142, art. 27(2).

177. See Foster, *supra* note 51, at 383–84 (discussing the false conflict “between the right to education and laws implemented to protect authors’ moral and material interests”).

178. Yu, *Anatomy*, *supra* note 17, at 54; see also Special Rapporteur’s Report on Copyright Policy, *supra* note 56, ¶ 26 (“Some elements of intellectual property protection are indeed required—or at least strongly encouraged—by reference to the right to science and culture. Other elements . . . go beyond what the right to protection of authorship requires, and may even be incompatible with the right to science and culture.”); Yu, *Nonmultilateral Era*, *supra* note 17, at 1048 (underscoring “the importance of distinguishing the human rights attributes of intellectual property rights from the non-human rights aspects of intellectual property protection”).

179. It is fair to question whether the issuance of these licenses would comply with the Berne Convention for the Protection of Literary and Artistic Works, which provides an optional appendix to cover compulsory reproduction and translation licenses. Berne

authors and inventors to receive compensation for their efforts while facilitating access to the products and technologies protected by intellectual property rights.¹⁸⁰ An example in the educational context is the sale of textbooks and other educational materials and technologies at deep discounts to ensure affordability. The prices of these materials and technologies do not have to go down to zero; they can be set as high as what would enable the relevant authors and inventors to maintain an adequate standard of living.¹⁸¹ To some extent, publishers have already released deeply discounted textbooks in developing countries—the Asian edition of English-language scientific textbooks immediately comes to mind.¹⁸² The issuance of human-rights-based compulsory licenses will take a step further to turn these voluntary releases into mandatory arrangements.

Another option is a promising proposal advanced by Professor Margaret Chon, who calls on countries to “enact digital-specific educational exceptions where these are relevant and appropriate to their educational development policies.”¹⁸³ As she explains:

Convention for the Protection of Literary and Artistic Works app., Sept. 9, 1886, 828 U.N.T.S. 221 (revised at Paris July 24, 1971); see also Sam Ricketson & Jane C. Ginsburg, *International Copyright and Neighboring Rights: The Berne Convention and Beyond* 867–69 (3d ed. 2022) (discussing the incorporation of the Berne Appendix into the TRIPS Agreement and the WIPO Copyright Treaty); Peter K. Yu, *A Tale of Two Development Agendas*, 35 *Ohio N.U. L. Rev.* 465, 481–84 (2009) (discussing the Berne Appendix). Nevertheless, commentators are divided over whether such issuance is Berne-compliant. See, e.g., Štrba, *supra* note 51, at 159–60 (discussing whether developing countries can issue compulsory licenses for printed copyrighted material outside the system provided by the Berne Appendix). Moreover, issuing compulsory licenses to ensure compliance with the human right to education is simply different from issuing those licenses without any human-rights-based justification.

180. See Joshua D. Sarnoff, *The Patent System and Climate Change*, 16 *Va. J.L. & Tech.* 301, 350–51 (2011) (discussing “humanitarian licensing” in the patent field); Yu, *Reconceptualizing Intellectual Property Interests*, *supra* note 17, at 1096–99 (discussing the provision of human-rights-based compulsory licenses); see also Special Rapporteur’s Report on Patent Policy, *supra* note 128, ¶ 72 (discussing the use of “socially responsible” or “humanitarian” licensing).

181. See General Comment No. 17, *supra* note 121, ¶ 2 (noting that the protection of material interests in the UDHR and the ICESCR merely requires that authors be “enable[d] . . . to enjoy an adequate standard of living”); Yu, *Anatomy*, *supra* note 17, at 58 (“Once state parties have reached this minimum threshold, they will enjoy a wide margin of discretion in determining whether additional protection should be granted.”); see also Matthew C.R. Craven, *The International Covenant on Economic, Social, and Cultural Rights: A Perspective on Its Development* 287–351 (1995) (discussing the “right to an adequate standard of living”); Helfer & Austin, *supra* note 170, at 189 (noting that “material interests” in the right to the protection of the interests resulting from intellectual productions “are . . . tied to the ability of creators to enjoy an adequate standard of living”).

182. See *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 526–27 (2013) (discussing the lowly priced Asian edition of English-language textbooks published by a foreign subsidiary of John Wiley & Sons).

183. Chon, *Intellectual Property “From Below”*, *supra* note 47, at 841–42.

[T]he potential for diffusion and dissemination of digital knowledge at almost zero marginal cost (once infrastructure is established) . . . should be used to nurture and expand the basic literacy and educational capacity that are prerequisites to the creation of a functioning future copyright content market. Especially where the danger to copyright interests associated with mass distribution via digital networks is reduced (e.g., because the work is culturally specific or is in a language that is not widely read), networked digital technology can and should be linked to diffusion models of information access.¹⁸⁴

Taking advantage of the low cost of digital reproduction and distribution, this proposal enables authors and publishers to retain the more lucrative markets in developed countries and for physical copies while forgoing for humanitarian purposes the significantly less remunerative market for digital copies in developing countries. Although quite promising when introduced more than a decade ago, this proposal has faced greater challenges today when more readers from both the developed and developing worlds have migrated to electronic reading, thanks to changing lifestyles and much-improved electronic reading devices.¹⁸⁵ Complications can also arise when printers, photocopiers, and other reproductive devices enable those with digital copies to produce physical copies and then sell the latter on an open market.

In addition, in the past two decades, human rights bodies have actively called for increased public funding and the use of alternative frameworks to help pay for educational products and technologies. As the CESCR recently observed in the context of scientific research:

States should provide adequate financial support for research that is important for the enjoyment of economic, social and cultural rights, either through national efforts or, if necessary, by resorting to international and technical cooperation. States could also resort to other incentives, such as so-called market entry rewards, which delink remuneration of successful research

184. *Id.* at 841.

185. But see Beiter, *African Copyright Pirate*, *supra* note 47, at 2 (“Not denying the educational value of digital texts, research shows that in-depth understanding still requires browsing through and marking sections in printed texts.”); Caroline B. Ncube, *Using Human Rights to Move Beyond Reformism to Radicalism: A2K for Schools, Libraries and Archives*, in *A Critical Guide to Intellectual Property* 117, 129 (Mat Callahan & Jim Rogers eds., 2017) (“In the Global South, where internet and device availability is high but usually too expensive for disadvantaged portions of society, bulk hard copies are required.”). Such migration has also raised new questions about property rights, considering that digital copyrighted works are usually released under a license, rather than sold as a good. See generally Joshua A.T. Fairfield, *Owned: Property, Privacy, and the New Digital Serfdom* (2017) (discussing the loss of property rights in the digital context); Aaron Perzanowski & Jason Schultz, *The End of Ownership: Personal Property in the Digital Economy* (2016) (discussing the digital challenge to the exhaustion-of-right doctrine).

from future sales, thus fostering research by private actors in these otherwise neglected fields.¹⁸⁶

To be sure, when public funding is unavailable or insufficient, incentives will still have to be created to facilitate the development of educational materials and technologies. Nevertheless, there is no requirement that the incentives be provided through property rights.¹⁸⁷ Indeed, international human rights instruments, bodies, and commentators have frequently recognized the possibility of using different modalities to realize the right to the protection of interests resulting from intellectual productions.¹⁸⁸ For instance, the former Special Rapporteur in the Field of Cultural Rights observed in her report on copyright policy, “Open access scholarships, open educational resources and public art and artistic expressions are examples of approaches that treat cultural production as a public endeavour for the benefit of all. Those approaches complement the private, for-profit models of production and distribution and have a particularly important role.”¹⁸⁹

All of these solutions have their individual strengths and weaknesses. One may also note that the proposals for compulsory licensing and the introduction of digital-specific educational exceptions were tailored to the educational needs of developing countries, while the call for increased public funding and greater open access arrangements can be implemented in both developed and developing countries, including the United States.¹⁹⁰ The key objective of this section is not to find the best proposal or to provide the details of a specific proposal; rather, it is to show the wide variety of proposals that human rights bodies and commentators have advanced to alleviate the tensions and conflicts between the right to education and the right to the protection of interests resulting from intellectual productions.

186. General Comment No. 25, *supra* note 56, ¶ 62.

187. See General Comment No. 17, *supra* note 121, ¶ 16 (“[T]he purpose of enabling authors to enjoy an adequate standard of living can . . . be achieved through one-time payments . . .”); Yu, *Anatomy*, *supra* note 17, at 62–63 (noting that state parties seeking to protect interests resulting from intellectual productions may consider protections outside the intellectual property regime).

188. See General Comment No. 17, *supra* note 121, ¶ 10 (“[T]he protection under article 15, paragraph 1 (c), need not necessarily reflect the level and means of protection found in present copyright, patent and other intellectual property regimes, as long as the protection available is suited to secure for authors the moral and material interests resulting from their productions . . .”); Yu, *Anatomy*, *supra* note 17, at 61–62 (advancing the “flexibility principle” that supports different modalities of protection for the human rights interests resulting from intellectual productions); Yu, *Reconceptualizing Intellectual Property Interests*, *supra* note 17, at 1088–92 (discussing the different acceptable modalities of protection that can be used to realize this right).

189. Special Rapporteur’s Report on Copyright Policy, *supra* note 56, ¶ 111.

190. Thanks to Professor Rachel Moran for noting the distinctions between these proposals.

Even though the solutions discussed thus far in this section have a strong domestic orientation, many of them also have a global dimension or can benefit from greater international cooperation.¹⁹¹ The need for such cooperation has never been more important since the outbreak of the COVID-19 pandemic, during which libraries and universities shut down for an extended period of time and users actively located information online. For users seeking educational materials during the pandemic, it did not matter whether those materials resided locally or abroad.¹⁹² Indeed, the voluntary open licenses issued by established publishers,¹⁹³ the Internet Archive's launch of its National Emergency Library,¹⁹⁴ and the public release of research data through initiatives such as the COVID-19 Open Research Dataset¹⁹⁵ have provided important

191. See General Comment No. 25, *supra* note 56, ¶¶ 77–84 (calling for greater global cooperation); see also ICESCR, *supra* note 147, art. 15(4) (requiring state parties to the ICESCR to “recognize the benefits to be derived from the encouragement and development of international contacts and co-operation in the scientific and cultural fields”); Beiter, *Right to Education*, *supra* note 74, at 612–20 (discussing bilateral and multilateral assistance in the educational context).

192. See Ruth L. Okediji, *Reframing International Copyright Limitations and Exceptions as Development Policy*, in *Copyright Law in an Age of Limitations and Exceptions* 429, 486 (Ruth L. Okediji ed., 2017) [hereinafter *Age of Limitations*] (“[I]n the digital environment, least-developed and developing countries rely on L&Es [(limitations and exceptions)] exercised in the developed countries, as much as they might on L&Es enacted in their own domestic copyright laws, to gain access to knowledge and information.”).

193. See, e.g., Andrew Albanese, *Penguin Random House Extends Open License for Online Readings Through 2020*, *Publishers Wkly.* (July 20, 2020), <https://www.publishersweekly.com/pw/by-topic/industry-news/libraries/article/83898-penguin-random-house-extends-open-license-for-online-readings-through-2020.html> [<https://perma.cc/9Y6R-ZMMD>]; J.K. Rowling Grants Open Licence for Teachers During Covid-19 Outbreak, J.K. Rowling (Mar. 20, 2020), <https://www.jkrowling.com/j-k-rowling-grants-open-licence-for-teachers-during-covid-19-outbreak/> [<https://perma.cc/3NCQ-8TU4>]; Publishers Make Coronavirus (COVID-19) Content Freely Available and Reusable, Wellcome (Mar. 16, 2020), <https://wellcome.ac.uk/press-release/publishers-make-coronavirus-covid-19-content-freely-available-and-reusable> [<https://perma.cc/7NH7-D5FG>].

194. See Timothy B. Lee, *Internet Archive Offers 1.4 Million Copyrighted Books for Free Online*, *Ars Technica* (Mar. 28, 2020), <https://arstechnica.com/tech-policy/2020/03/internet-archive-offers-thousands-of-copyrighted-books-for-free-online/> [<https://perma.cc/7QY5-HAH2>]; National Emergency Library, Internet Archive, <http://blog.archive.org/national-emergency-library/> [<https://perma.cc/3NBA-DGUH>] (last visited Mar. 4, 2023) (launching an initiative to make books temporarily available to “support[] emergency remote teaching, research activities, independent scholarship, and intellectual stimulation while universities, schools, training centers, and libraries were closed due to COVID-19”). See generally Aaron Schwabach, *The Internet Archive's National Emergency Library: Is There an Emergency Fair Use Superpower?*, 18 *Nw. J. Tech. & Intell. Prop.* 187 (2021) (discussing the National Emergency Library).

195. See Press Release, White House Off. of Sci. & Tech. Pol'y, *Call to Action to the Tech Community on New Machine Readable COVID-19 Dataset* (Mar. 16, 2020),

benefits to learners and researchers around the world. With the rise of cloud-based educational platforms, which are often globally accessible, the actual location of educational materials has also become less important.¹⁹⁶

Finally, at the theoretical and policy levels, commentators have advanced many techniques and approaches to address the tensions and conflicts between competing human rights. As I have noted in an earlier article:

[These commentators] have discussed the distinction between true conflicts and false conflicts, drawing on conflict-of-law jurisprudence and scholarship. They have also explored the use of hierarchies, balancing techniques, the proportionality doctrine, and interpretations by reference to external norms—such as scientific norms in relation to the right to enjoy the benefits of scientific progress and its applications. In addition, the Ontario Human Rights Commission introduced a Policy on Competing Human Rights, which outlines a process for reconciling competing human rights claims and providing case-by-case accommodation of individual and group rights.¹⁹⁷

To alleviate tensions and conflicts between competing human rights, some commentators have further advocated the institution of human rights impact assessment.¹⁹⁸ Even though such assessment can be challenging, the past decades have seen human rights bodies and experts developing a wide array of indicators to measure human rights impacts, including those in the education area.¹⁹⁹ Apart from standard indicators such as literacy and numeracy rates and enrollment numbers and percentages in primary, secondary, and tertiary education,²⁰⁰ the

<https://trumpwhitehouse.archives.gov/briefings-statements/call-action-tech-community-new-machine-readable-covid-19-dataset/> [<https://perma.cc/CP48-SZQQ>].

196. See Peter K. Yu, *Towards the Seamless Global Distribution of Cloud Content*, in *Privacy and Legal Issues in Cloud Computing* 180, 181–87 (Anne S.Y. Cheung & Rolf H. Weber eds., 2015) (discussing how cloud platforms break territorial barriers).

197. Yu, *Anatomy*, supra note 17, at 78–79.

198. See General Comment No. 17, supra note 121, ¶ 35 (“States parties should . . . consider undertaking human rights impact assessments prior to the adoption and after a period of implementation of legislation for the protection of the moral and material interests resulting from one’s scientific, literary or artistic productions.”); James Harrison, *The Human Rights Impact of the World Trade Organisation* 233 (2007) (“If States were to conduct human rights-compliant impact assessments as a key component of the negotiating process of any new trade agreement, this would be an important step in ensuring that trade law rules protect and promote human rights.”); Yu, *Nonmultilateral Era*, supra note 17, at 1096–98 (discussing human rights impact assessment).

199. See generally *Human Rights and Statistics: Getting the Record Straight* (Thomas B. Jabine & Richard P. Claude eds., 1992) (identifying good statistical practice in the human rights field); Todd Landman & Edzia Carvalho, *Measuring Human Rights* (2010) (discussing how to measure human rights).

200. See, e.g., *Indicators*, World Bank, <https://data.worldbank.org/indicator> [<https://perma.cc/SZ2Z-G8W7>] (last visited Feb. 3, 2023) (providing a list of indicators in the education area).

assessment exercise can consider more creative quantitative and qualitative metrics, such as the costs of educational materials and technologies in relation to mean per-capita income, the frequency of students sharing these materials and technologies,²⁰¹ and the conditions under which they share.

Despite the many helpful solutions advanced by human rights bodies and commentators to alleviate the tensions and conflicts between the right to education and the right to the protection of interests resulting from intellectual productions, complications can arise in those jurisdictions that have extended fundamental right protection to intellectual property. A case in point is the European Union, which offers such protection through the fundamental right to own private property. The right-to-property provision in article 17(2) of the Charter of Fundamental Rights of the European Union states expressly that “[i]ntellectual property shall be protected.”²⁰² Since the sub-provision’s adoption in December 2000, commentators have debated whether it has upset the existing balance drawn in the right-to-property provision.²⁰³ In *Anheuser-Busch, Inc. v. Portugal*, the Grand Chamber of the European Court of Human Rights also extended the protection of “the peaceful enjoyment of . . . possessions” in article 1 of Protocol No. 1 to the European Convention of Human Rights to cover both registered trademarks and trademark applications of a multinational corporation.²⁰⁴ This approach has since

201. See Pernille Askerud, *A Guide to Sustainable Book Provision 16* (1997) (“Textbooks are a rare commodity in most developing countries. One book per student (in any subject) is the exception, not the rule . . .”); Shaver, *Ending Book Hunger*, *supra* note 63, at 2 (“Today, many countries in sub-Saharan Africa still cannot provide a textbook for every student.”).

202. Charter of Fundamental Rights of the European Union art. 17(2), 2000 O.J. (C 364) 1.

203. See generally Christophe Geiger, *Intellectual Property Shall Be Protected!?*—Article 17(2) of the Charter of Fundamental Rights of the European Union: A Mysterious Provision With an Unclear Scope, 31 *Eur. Intell. Prop. Rev.* 113 (2009); Jonathan Griffiths & Luke McDonagh, *Fundamental Rights and European IP Law: The Case of Art 17(2) of the EU Charter*, in *Constructing European Intellectual Property: Achievements and New Perspectives* 75 (Christophe Geiger ed., 2013); Martin Husovec, *The Essence of Intellectual Property Rights Under Article 17(2) of the EU Charter*, 20 *German L.J.* 840 (2019).

204. 45 *Eur. Ct. H.R.* 36 (2007); see also Protocol to the Convention for the Protection of Human Rights and Fundamental Freedoms art. 1, Mar. 20, 1952, 213 U.N.T.S. 262 (“Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.”). From a human rights standpoint, the court’s willingness to extend human-rights-like protection to corporations is a problem in and of itself. See Jack Donnelly, *Universal Human Rights in Theory and Practice* 30 (3d ed. 2013) (“Collectivities of all sorts have many and varied rights, but these are not human rights—unless we substantially recast the concept.”); see also Yu, *Nonmultilateral Era*, *supra* note 17, at 1066–74 (discussing whether human rights protection should be extended to corporate intellectual property rights holders).

been extended to copyright in subsequent cases.²⁰⁵ In view of these instruments and decisions, the analysis of the tensions and conflicts between intellectual property and human rights will be more complicated in the European Union than in many parts of the world.

C. Summary

The discussion of the tensions and conflicts between the right to education and the right to the protection of interests resulting from intellectual productions provides several new or updated insights into the debate on property and education. These additional insights will complement those insights already gleaned from the intellectual property forum.²⁰⁶

First, the tensions and conflicts between these two competing human rights provide an instructive parallel to the impediments posed by intellectual property rights to education. Studying the interactions between these two rights will therefore show how to utilize or adjust property rights to improve public access to education. Even in the face of a collision between two fundamental rights, there are still many solutions. More importantly, as the reforms, techniques, and approaches identified in this Part have shown, solutions can reside within the property regime—and, by extension, the intellectual property regime—even though the pressures behind the development of these solutions lie outside the regime.

Second, those on either side of the debate on property and education in the human rights context will be supported by a different fundamental right. Each side will therefore have some strong legal entitlements and will assume a good position to advance right-based arguments. Although the adversarial setting in legal analysis makes it tempting to select winners and losers, the narrative concerning whether one group should prevail over another is far from clear. How to resolve this debate will likely depend on a holistic case-by-case evaluation of specific circumstances.

Third, compromises are sometimes needed when two fundamental rights collide. To some extent, the need for human rights bodies and commentators to develop a wide array of proposals, techniques, and approaches to alleviate the tensions and conflicts between the right to education and the right to the protection of interests resulting from

205. See, e.g., *Bălan v. Moldova*, App. No. 19247/03, ¶¶ 34–46 (Eur. Ct. H.R. Jan. 29, 2008), <https://hudoc.echr.coe.int/eng?i=001-84720> [<https://perma.cc/X78L-94WP>] (finding a violation of article 1 of Protocol No. 1 to the European Convention of Human Rights based on the refusal of Moldovan courts to provide compensation for the unlawful use of the complainant’s copyrighted photograph); *Safarov v. Azerbaijan*, App. No. 885/12, ¶¶ 30–37 (Eur. Ct. H.R. Sept. 1, 2022), <https://hudoc.echr.coe.int/eng?i=002-13749> [<https://perma.cc/A7JN-QSF5>] (finding a violation of article 1 of Protocol No. 1 to the European Convention of Human Rights based on the Azerbaijani courts’ failure to protect the intellectual property interests in a copyrighted book).

206. See *supra* Part I.

intellectual productions has shown that the introduction of positive rights to foster public access to education alone, while important, does not end the debate on property and education. If policymakers are to improve public access to education, they will need to supplement those positive rights with complementary reforms.

III. "EDUCATION THEFT"

Parts I and II draw insights from the debate on property and education in the intellectual property and human rights contexts. They highlight the need for reforms to improve public access to education. Building on the discussion of developments in the intellectual property and human rights fora, this Part applies the insights gleaned from these fora to the phenomenon surrounding so-called "education theft." Due to this Essay's limited length, the discussion focuses on only three key insights.

First, property rights have been widely criticized when the public lacks access to essentials and when those essentials have been increasingly propertized and commodified. The response to the various impediments intellectual property rights have posed to education is no exception.²⁰⁷ Yet, both Parts I and II have shown that property rights may not be the primary culprit. In fact, one could find solutions to improve public access to education even inside the property regime, especially with an appropriate property model.²⁰⁸ There is no need to throw out the baby with the bathwater.

Second, property rights have a central place in American society²⁰⁹—and, for that matter, in societies in many other jurisdictions. Any clash with these rights will therefore invite a clear-cut binary narrative, with winners and losers. In reality, however, the property regime has struggled with historical and systemic inequities.²¹⁰ As Lawrence Liang observes in the intellectual property context: "The simplistic opposition between legality and illegality that divides pirates from others renders almost impossible any serious understanding or engagement with the phenomenon of piracy. . . . In other words, before we jump into making normative policy interventions, which often draw[] black-and-white distinctions, we need to explore the various shades and depths of gray."²¹¹ It is therefore important

207. See *supra* section I.B.

208. See *supra* section I.C–D.

209. See Macpherson, *supra* note 149, at 77 ("We have made property so central to our society that any thing and any rights that are not property are very apt to take second place.").

210. See generally Alfred L. Brophy, Alberto Lopez & Kali Murray, *Integrating Spaces: Property Law and Race* (2011) (collecting cases that cover issues lying at the intersection of property law and race).

211. Lawrence Liang, *Beyond Representation: The Figure of the Pirate*, in *Access to Knowledge*, *supra* note 62, at 353, 361.

to develop a contextualized understanding of property rights—and, by extension, policies emanating from those rights, such as the push for greater criminalization of misappropriation of property.

Third, Part I has shown that those who are eager to improve public access to education welcome the introduction of positive rights to foster such access, regardless of whether they are introduced inside or outside the property regime. Introducing rights to provide a countervailing force to intellectual property rights therefore provides a key line of reform. Nevertheless, Part II has shown that the introduction of positive rights alone is unlikely to provide a satisfactory solution. Instead, policymakers and commentators will need to advance complementary reforms to foster public access to education.

This Part explores these three key insights in turn. It also advances three modest recommendations: (1) the development of a more sophisticated understanding of property rights in their historical and socioeconomic contexts; (2) a careful evaluation of the expediency of criminalizing residency requirement violations; and (3) an exploration of potential technological solutions to address problems surrounding these violations. The first recommendation is more abstract and theoretical, while the next two are more practical and emanate from a more contextualized understanding of property rights.

A. *Developing a Contextualized Understanding*

Property rights do not exist in a vacuum.²¹² It is therefore important to put these rights in their proper historical and socioeconomic contexts.²¹³ In doing so, policymakers and commentators can better understand why things are as they are, learn from past experiences, acquire perspectives on current developments, and identify new trends.²¹⁴

212. As Joseph Singer observes:

[P]roperty rights will differ depending on the context within which they are exercised and the effects they have on other actors; . . . they must be redefined over time to prevent the illegitimate concentration of power in ways that keep individuals from participating in the market system on fair and equal terms.

Singer, Entitlement, *supra* note 75, at 174.

213. See, e.g., Timothy M. Mulvaney, Property-as-Society, 2018 Wis. L. Rev. 911, 912 [hereinafter Mulvaney, Property-as-Society] (discussing the progressive view that “sees property as serving a whole host of evolving social goals”); Stephen R. Munzer, Property as Social Relations, *in* New Essays in the Legal and Political Theory of Property 36, 36 (Stephen R. Munzer ed., 2001) (holding the view that “property is best seen as *social* relations among persons with respect to things”); Joseph William Singer, The Reliance Interest in Property, 40 Stan. L. Rev. 611, 652–63 (1988) (discussing property as social relations). See generally Yu, Human Rights 2.0, *supra* note 17, at 1416–21 (discussing contextual analyses in the human rights context).

214. Cf. Rhona Smith, Human Rights Based Approaches to Research, *in* Research Methods in Human Rights 6, 12 (Lee McConnell & Rhona Smith eds., 2018) (“A human

Such a contextualized understanding can also ensure that the property regime is appropriately designed to maximize the opportunities provided to property owners, users, and other members of society.²¹⁵ Both objectives will be important to the debate on property and education.

Consider, for example, the property aspects of intellectual property rights. Why do certain groups receive protection while others do not?²¹⁶ Why does the current system privilege some forms of creativity and innovation while ignoring others?²¹⁷ In the past few years, there has been a growing effort to find ways to make the intellectual property system more inclusive. These efforts not only feature proposals from progressive reformers, but have also been openly embraced by the U.S. Patent and

rights based approach to research means researching human rights issues with due consideration as to the surrounding circumstances. This can mean ensuring an appropriate historical, cultural, religious, legal and political understanding of the issues which shape the subject.”).

215. See Joseph William Singer, *Democratic Estates: Property Law in a Free and Democratic Society*, 94 *Cornell L. Rev.* 1009, 1047 (2009) [hereinafter *Singer, Democratic Estates*] (noting the need to understand “the role that property and property law play in a free and democratic society that treats each person with equal concern and respect”).

216. See Keith Aoki, *Distributive and Syncretic Motives in Intellectual Property Law (With Special Reference to Coercion, Agency, and Development)*, 40 *U.C. Davis L. Rev.* 717, 724–47, 758–69 (2007) (discussing the role of Black inventors in the early days of the American patent system and the misappropriation of the works of Black American blues musicians); K.J. Greene, *Copyright, Culture & Black Music: A Legacy of Unequal Protection*, 21 *Hastings Commc’ns & Ent. L.J.* 339, 340 (1999) (“African-American music artists, as a group, were routinely deprived of legal protection for creative works under the copyright regime.”); Lateef Mtima, *An Introduction to Intellectual Property Social Justice and Entrepreneurship: Civil Rights and Economic Empowerment for the 21st Century*, in *Intellectual Property, Entrepreneurship and Social Justice: From Swords to Ploughshares* 1, 15–16 (Lateef Mtima ed., 2015) (“Slaves, being property themselves, could not hold patents as a matter of law.”); Dotan Oliar & Marliese Dalton, *Are Men and Women Creating Equal? Contextualizing Copyright and Gender*, in *Intellectual Property, Innovation and Global Inequality* (Daniel Benoliel, Francis Gurry, Keun Lee & Peter K. Yu eds., forthcoming 2023) [hereinafter *Innovation and Global Inequality*] (discussing gender inequality in the intellectual property system); Anjali Vats & Deidre A. Keller, *Critical Race IP*, 36 *Cardozo Arts & Ent. L.J.* 735, 758–59 (2018) (noting the “privileges and presumptions” that Whiteness has brought with it in the intellectual property context). See generally Anjali Vats, *The Color of Creatorship: Intellectual Property, Race, and the Making of Americans* (2020) (discussing intellectual property laws as “discursive formations” shaped by culture, identity, and power).

217. See generally Jessica C. Lai, *Patent Law and Women: Tackling Gender Bias in Knowledge Governance* (2022) (criticizing patent law and the knowledge governance system it supports for being gendered); Colleen V. Chien, *The Inequalities of Innovation*, 72 *Emory L.J.* 1 (2022) (discussing the inequalities of innovation based on income, opportunity, and access and offering legal and administrative solutions to address these inequalities); Alenka Guzmán & Flor Brown, *Building Innovation Skills to Overcome Gender Inequality: Mexico, India and Brazil*, in *Innovation and Global Inequality*, supra note 216 (discussing gender-related variations in innovative activities).

Trademark Office and WIPO.²¹⁸ Those advocating inclusivity reforms understand the societal benefits provided by an intellectual property system that is properly designed to maximize the creative contributions from all segments of the population.

Similar questions can be asked about property rights in the educational context—and, more specifically, about the phenomenon surrounding so-called “education theft.” As commentators have widely noted, the problems raised by this old but increasingly salient phenomenon and the eagerness for local school districts and law enforcement authorities to aggressively tackle it can be linked to factors relating to both race and class.²¹⁹ If policymakers and commentators are to develop appropriate remedies, they will need to take note of these root causes and analyze the debate on property and education in its proper historical and socioeconomic contexts.

After all, as Parts I and II have shown, there are strong arguments on both sides of the property divide. Those who advocate for stronger protection against so-called “education theft” invoke property rights. By contrast, their opponents advance arguments based on civil, constitutional, or human rights to demand greater public access to education. In a clash between these competing interests, it is not always easy to determine who is right and who is wrong, especially when one takes into account the historical and systemic inequities in the property regime. A greater contextual understanding of property rights is therefore in order.

One strand of property theory that welcomes contextual analyses is what commentators have referred to as the “Progressive Property” school²²⁰ or what Professor Joseph Singer has described as “democratic model of property law.”²²¹ Focusing on property rights as a social institution and going beyond market efficiency and the power of exclusion, the Progressive Property school calls for a greater focus on “underlying human values that property serves and the social relationships

218. See Gender Equality, Diversity and Intellectual Property, World Intell. Prop. Org., <https://www.wipo.int/women-and-ip/en/> [<https://perma.cc/4CWL-NU9R>] (last visited Feb. 4, 2023); Inclusive Innovation, U.S. Pat. & Trademark Off., <https://www.uspto.gov/initiatives/equity> [<https://perma.cc/8PRJ-FEAF>] (last visited Feb. 4, 2023).

219. See Baldwin Clark, Education as Property, *supra* note 2, at 398 (“School districts can . . . [legally] restrict access to their schools to only students residing within their boundaries. This practice has a long race and class pedigree dating back to Jim Crow residential segregation and post-*Brown v. Board of Education* efforts to desegregate public schools.” (footnote omitted)).

220. See generally Rachael Walsh, Property Rights and Social Justice: Progressive Property in Action 23–43 (2021) (discussing the Progressive Property school of thought); Gregory S. Alexander, Eduardo M. Peñalver, Joseph William Singer & Laura S. Underkuffler, A Statement of Progressive Property, 94 *Cornell L. Rev.* 743 (2009) (articulating the vision of this school of property theory).

221. Singer, Democratic Estates, *supra* note 215, at 1047.

it shapes and reflects.”²²² As Professors Alexander, Peñalver, Singer, and Underkuffler declare in *A Statement of Progressive Property*: “Values promoted by property include life and human flourishing, the protection of physical security, the ability to acquire knowledge and make choices, and the freedom to live one’s life on one’s own terms. They also include wealth, happiness, and other aspects of individual and social well-being.”²²³

Scholars subscribing to the Progressive Property school have offered analyses that will help think through not only the phenomenon surrounding so-called “education theft” but also property rights in the educational context. For instance, Professor Alexander draws on the human capabilities approach to develop a “social-obligation norm” in property law to “enable development of the capabilities that are essential for human beings.”²²⁴ Emphasizing marginality thinking in property law, the late Professor A.J. van der Walt called for more attention “on the social position, economic status and personal circumstances of the parties involved in property relations or disputes and less on their legal status or established property rights.”²²⁵ My colleague Professor Timothy Mulvaney declares that “[p]roperty, as an institution crafted to benefit the public interest, necessarily must be accountable to the plural values that characterize the nation’s democratic culture.”²²⁶

To be sure, there is still an ongoing debate about the strengths and weaknesses of the Progressive Property school, including whether it has attracted sufficient traction among judges, policymakers, and legislators.²²⁷ Nevertheless, Part I has shown the benefits and viability of locating alternative property models when the traditional model does not fit well with the situation at hand, such as in the intellectual property context.²²⁸ Part II also recounts how the drafters of key international and regional human rights instruments refrained from tying international obligations to a specific property model, lest the choice limit state autonomy and backfire on those individuals that the instruments sought to protect.²²⁹

In the debate on property and education, there remain strong disagreements over what the appropriate arrangements should be. There

222. Alexander et al., *supra* note 220, at 743.

223. *Id.*

224. Gregory S. Alexander, *The Social-Obligation Norm in American Property Law*, 94 *Cornell L. Rev.* 745, 768 (2009). See generally Gregory S. Alexander, *Property and Human Flourishing* (2018) (advancing a theory that considers human flourishing as the moral foundation of property rights).

225. A.J. van der Walt, *Property in the Margins* 245 (2009).

226. Mulvaney, *Property-as-Society*, *supra* note 213, at 913.

227. Compare Ezra Rosser, *The Ambition and Transformative Potential of Progressive Property*, 101 *Calif. L. Rev.* 107, 109–13 (2013) (critiquing the Progressive Property school), with Timothy M. Mulvaney, *Progressive Property Moving Forward*, 5 *Calif. L. Rev. Cir.* 349, 352–58 (2014) (offering a response and challenging Professor Rosser’s view on whether private property can foster meaningful progressive change).

228. See *supra* Part I.

229. See *supra* Part II.

is therefore no reason why policymakers and commentators should not explore different property models to find one that would best improve public access to education. Studying property rights in their historical and socioeconomic contexts will help locate these appropriate arrangements. Because determining what constitutes theft depends on rules of property ownership, a more contextualized understanding of property rights will also help evaluate whether the theft label in so-called “education theft” is justified.

B. *Evaluating the Expediency of Criminalization*

Given the central place property rights have in American society, the push for criminalization to protect property is unsurprising. In the intellectual property field, for example, there has been a growing push for criminal sanctions to protect intellectual property since the 1980s,²³⁰ when intellectual-property-based goods and services became more valuable.²³¹ In the mid-1990s, following the emergence of new communication technologies and the mainstreaming of the internet, criminalization efforts quickly accelerated.²³² A case in point is the No Electronic Theft Act of 1997, which extended criminal liability to infringing activities that had not resulted in financial gains.²³³ Since the early 2000s, the United States has also been actively negotiating bilateral, regional, and plurilateral

230. See Eldar Haber, *Criminal Copyright* 168–70 (2018) (noting the growing enactment of criminal trademark infringement provisions since the 1980s); Irina D. Manta, *The Puzzle of Criminal Sanctions for Intellectual Property Infringement*, 24 *Harv. J.L. & Tech.* 469, 484–85 (2011) (noting the growing enactment of criminal copyright infringement provisions).

231. See R. Michael Gadbaw & Rosemary E. Gwynn, *Intellectual Property Rights in the New GATT Round*, in *Intellectual Property Rights: Global Consensus, Global Conflict?* 38, 45 (R. Michael Gadbaw & Timothy J. Richards eds., 1988) (“The new reality is that the U.S. economy is increasingly dependent for its competitiveness on its ability to protect the value inherent in intellectual property. United States exports are increasingly weighted toward goods with a high intellectual property content.”); Bruce A. Lehman, *Speech Given at the Inaugural Engelberg Conference on Culture and Economics of Participation in an International Intellectual Property Regime*, 29 *N.Y.U. J. Int’l L. & Pol.* 211, 211 (1997) (“Many Americans have begun to derive their livelihoods from products of their minds, as opposed to products of manual labor . . .”). See generally J. Thomas McCarthy, *Intellectual Property—America’s Overlooked Export*, 20 *U. Dayton L. Rev.* 809 (1995) (discussing the need to protect intellectual property rights in an era when information products constitute a major sector of the U.S. economy).

232. See Haber, *supra* note 230, at 163 (“Technology (combined with other considerations) has played and still plays a leading role in copyright criminalization.”).

233. Pub. L. No. 105-147, 111 Stat. 2678 (1997). See generally Eric Goldman, *A Road to No Ware: The No Electronic Theft Act and Criminal Copyright Infringement*, 82 *Or. L. Rev.* 369 (2003).

trade agreements, which include new international minimum standards for criminal sanctions on intellectual property infringement.²³⁴

The logic behind these criminalization efforts is simple. Eager to protect the value in intellectual-property-based goods and services, intellectual property rights holders and their supportive policymakers and industry groups embrace the logic “if value, then right.”²³⁵ When intellectual property rights are protected as property rights, this logic becomes “if value, then property right.” Because the protection of property right frequently attracts criminal liability—which helps shift the enforcement burden from private right holders to governments (and, in turn, taxpayers)²³⁶—that logic quickly evolves into “if value, then criminal liability.” The latter logic helps explain the increasing push for criminal liability in intellectual property law at both the domestic and international levels.

Yet, as many legal and intellectual property commentators have noted, the logic “if value, then right”—and, by extension, the logics “if value, then property right” and “if value, then criminal liability”—is seriously flawed.²³⁷ Legal philosopher Felix Cohen is one of the earliest

234. See, e.g., Dominican Republic–Central America Free Trade Agreement arts. 15.5, 15.8, 15.11, Aug. 5, 2004, https://ustr.gov/sites/default/files/uploads/agreements/cafta/asset_upload_file934_3935.pdf [<https://perma.cc/5PGQ-JR2U>]; United States–Australia Free Trade Agreement, U.S.–Austl., arts. 17.4, 17.7, 17.11, May 18, 2004, https://ustr.gov/sites/default/files/uploads/agreements/fta/australia/asset_upload_file148_5168.pdf [<https://perma.cc/445J-24G2>]; United States–Singapore Free Trade Agreement, U.S.–Sing., arts. 16.6, 16.9, May 6, 2003, https://ustr.gov/sites/default/files/uploads/agreements/fta/singapore/asset_upload_file708_4036.pdf [<https://perma.cc/8G8Q-VEXR>].

235. Rochelle Cooper Dreyfuss, *Expressive Genericity: Trademarks as Language in the Pepsi Generation*, 65 *Notre Dame L. Rev.* 397, 405 (1990) [hereinafter Dreyfuss, *Expressive Genericity*].

236. See Henning Grosse Ruse-Khan, *Re-delineation of the Role of Stakeholders: IP Enforcement Beyond Exclusive Rights*, in *Intellectual Property Enforcement: International Perspectives* 43, 51–52 (Li Xuan & Carlos Correa eds., 2009) [hereinafter *Intellectual Property Enforcement*] (noting the “trend for externalizing the risks and resources to enforce [intellectual property] rights away from the originally responsible right-holders towards state authorities”); Li Xuan, *Ten General Misconceptions About the Enforcement of Intellectual Property Rights*, in *Intellectual Property Enforcement*, *supra*, at 14, 28 (“[S]hifting responsibility . . . would shift the cost of enforcement from private parties to the government and ensure right-holders are beneficiaries without taking responsibility.”); Peter K. Yu, *Six Secret (and Now Open) Fears of ACTA*, 64 *SMU L. Rev.* 975, 1029 (2011) (“[G]reater criminal enforcement could shift costs, responsibility, and risks from private rights holders to that of national governments.”).

237. See, e.g., Dreyfuss, *Expressive Genericity*, *supra* note 235, at 405–07 (criticizing the “if value, then right” logic); Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 *Va. L. Rev.* 149, 178–80 (1992) (criticizing the “value is property” model). See generally Alfred C. Yen, *Brief Thoughts About If Value/Then Right*, 99 *B.U. L. Rev.* 2479 (2019) (discussing the “if value/then right” principle and its consequences for intellectual property law).

critics of such logic, calling it “transcendental nonsense.”²³⁸ As he explains, this logic “purports to base legal protection upon economic value, when, as a matter of actual fact, the economic value . . . depends upon the extent to which it will be legally protected.”²³⁹ The reasoning, in his view, is circular.

To make matters worse, the increased push for criminal liability in intellectual property law not only reflects flawed logic but can also be highly undesirable. Because of heavy lobbying by self-interested industry groups,²⁴⁰ the penalty imposed is often disproportional to the harm²⁴¹—an important issue in not only criminal law but also human rights law.²⁴² In addition, there may be limited deterrence.²⁴³ As Professor Geraldine Moohr explains in the copyright context, “Criminal laws are most effective in educating the public when the prohibition is ‘Thou Shalt Not,’ and are less so when the prohibition is ‘Thou shalt not copy under certain circumstances and certain conditions.’”²⁴⁴ Even worse, because unauthorized creative and innovative activities can generate positive

238. Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 *Colum. L. Rev.* 809, 811–12 (1935).

239. *Id.* at 815; see also Dreyfuss, *Expressive Genericity*, *supra* note 235, at 409 (“By equating ‘value’ with ‘right,’ the decisions fail to create an internal reference point against which to measure the need for exclusivity.”).

240. See generally Monica Horten, *A Copyright Masquerade: How Corporate Lobbying Threatens Online Freedoms* (2013) (discussing how corporate lobbying for copyright law has undermined online freedoms); Brink Lindsey & Steven M. Teles, *The Captured Economy: How the Powerful Enrich Themselves, Slow Down Growth, and Increase Inequality* 64–89 (2017) (discussing legislative capture in the intellectual property area).

241. See Peter K. Yu, *Digital Copyright Reform and Legal Transplants in Hong Kong*, 48 *U. Louisville L. Rev.* 693, 704 (2010) (discussing why imposing a criminal penalty on unauthorized file-sharing is disproportionate to the offense).

242. See General Comment No. 17, *supra* note 121, ¶ 23 (“Limitations must . . . be proportionate, meaning that the least restrictive measures must be adopted when several types of limitations may be imposed.”). See generally Jonas Christoffersen, *Human Rights and Balancing: The Principle of Proportionality*, *in* *Research Handbook on Human Rights and Intellectual Property* 19 (Christophe Geiger ed., 2015) (discussing the use of the proportionality principle to balance conflicting interests and adjudicate disputes placed before the European Court of Human Rights); Henning Grosse Ruse-Khan, *Proportionality and Balancing Within the Objectives for Intellectual Property Protection*, *in* *Intellectual Property Law and Human Rights*, *supra* note 51, at 201 (calling for the use of proportional balancing as a guiding principle in the interpretation of the TRIPS Agreement); Wouter Vandenhoele, *Conflicting Economic and Social Rights: The Proportionality Plus Test*, *in* *Conflicts Between Fundamental Rights* 559 (Eva Brems ed., 2008) (calling for the introduction of a “proportionality plus test,” which prioritizes vulnerable groups and emphasizes the core of the rights).

243. See Haber, *supra* note 230, at 249–50 (discussing the deterrence of criminal sanctions).

244. Geraldine Szott Moohr, *Defining Overcriminalization Through Cost-Benefit Analysis: The Example of Criminal Copyright Laws*, 54 *Am. U. L. Rev.* 783, 797–98 (2005).

externalities,²⁴⁵ increased criminalization could reduce knowledge spillovers and, in turn, social benefits.²⁴⁶

The disturbing analysis concerning overcriminalization in intellectual property law extends equally well to so-called “education theft,” which occurs when parents, or legal guardians, enroll children in schools outside their school districts.²⁴⁷ Through intentional violations of the residency requirements, these parents allegedly steal “seats” in the classroom, creating a potential negative impact on the affected school districts,²⁴⁸ the relevant taxpayers, and otherwise eligible school-age children. Considering the immense value provided by education—and, in particular, education in preferred school districts—one can easily apply the logics “if value, then property rights” and “if value, then criminal liability” mentioned above. Yet, like overcriminalization in intellectual property law, increased criminalization in the education field can be ineffective, undesirable, and unnecessary.

To begin with, the appropriateness and effectiveness of criminal penalties depend on one’s perception of the severity of an alleged crime—something a more contextualized understanding of property rights is likely to change.²⁴⁹ As Professor Tom Tyler reminds us, people obey laws when “following a law is the morally right thing to do” and when “laws and legal authorities are legitimate and ought to be obeyed.”²⁵⁰ Likewise, Professor Stuart Green declares, “Whether it is wrong to violate a given law against theft, and whether it is therefore just to be subjected to criminal penalties for doing so, depends on whether the property regime within which such law functions is itself just.”²⁵¹

In his book *Thirteen Ways to Steal a Bicycle*, Professor Green recounts a very interesting study that he conducted to explore the different degrees of blameworthiness between “illegally taking a fifty-dollar physical book [and] illegally attending a fifty-dollar lecture”—the latter not too different from the theft of a classroom seat in a preferred educational institution.²⁵² As he reports:

245. See *supra* text accompanying notes 29–30.

246. See Peñalver & Katyal, *supra* note 32, at 175 (“[T]he law should be especially careful not to overdetter infringement *ex ante* through an overreliance on laws whose penalties are so severe that they foreclose all types of transgressions.”).

247. See *supra* text accompanying notes 2–4.

248. See Baldwin Clark, *Education as Property*, *supra* note 2, at 406–07 (noting the differential in funding between resident and nonresident students).

249. See *supra* section III.A.

250. Tom R. Tyler, *Compliance With Intellectual Property Laws: A Psychological Perspective*, 29 N.Y.U. J. Int’l L. & Pol. 219, 234 (1997).

251. Stuart P. Green, *Thirteen Ways to Steal a Bicycle: Theft Law in the Information Age* 103 (2012) [hereinafter Green, *Thirteen Ways to Steal a Bicycle*].

252. *Id.* at 233.

Sixty-seven percent said that taking the physical book was more blameworthy, 10 percent said that listening to the lecture without paying was more blameworthy, and 22 percent said there was no difference. In addition, 55 percent said it was worse for [the perpetrator] to sneak into the hall if it was full, 7 percent said it was worse to sneak into a partially empty hall, and 38 percent said there was no difference. On a scale from 1 to 9, the average blameworthiness score was 7.65 for taking the physical book, 6.01 for sneaking into the full hall, and 5.17 for sneaking into the partially empty hall.²⁵³

This study is interesting because it shows that the public generally does not view the theft of a seat in a lecture hall the same way as the theft of a book—a physical object. Equally illuminating is the fact that one’s perception of the former depends on whether extra seats are available in the lecture hall. This factor is important to the debate on so-called “education theft” because governments do have obligations to provide for education,²⁵⁴ even if they ignore the right to education and other related human rights obligations. Because the number of available seats will affect one’s perception of the theft of a classroom seat, and, in turn, one’s view on the appropriate criminal sanction, it is hard to delink the debate on so-called “education theft” from the governments’ obligation to provide for education. Such linkage is particularly important considering the many well-documented systemic problems and inequities in the existing education system, especially in relation to racialized minorities.²⁵⁵ Even if facially neutral legislation is to be introduced, those systemic problems and inequities virtually guarantee that any criminal penalties introduced will have disparate impacts on those harmed by the current system.²⁵⁶

253. *Id.*

254. See *Brown v. Bd. of Educ.*, 347 U.S. 483, 493 (1954) (“[E]ducation is perhaps the most important function of state and local governments.”).

255. See Baldwin Clark, *Barbed Wire Fences*, *supra* note 5, at 511 (noting “a long history of state and public actions segregated the United States by race and class”); Baldwin Clark, *Education as Property*, *supra* note 2, at 398 (“Th[e] practice [of prosecuting the crime of ‘stealing education’] has a long race and class pedigree dating back to Jim Crow residential segregation and post-*Brown v. Board of Education* efforts to desegregate public schools.”); Baldwin Clark, *Stealing Education*, *supra* note 2, at 570–71 (“[R]ace-class segregation so pervades public education that many Black children, especially working-class and poor Black children, continue to experience the same subordination that accompanied de jure segregation.”); Jiménez & Glater, *supra* note 122, at 133 (noting the “communities of color [that have been] historically excluded from higher education opportunities”); Wilson, *supra* note 6, at 2437 (“[T]he historical and present correlations between race, class, power, and social capital have very real consequences in the context of attracting parents and students to a school district.”).

256. Worse still, such effort may “allow[] taxpayers to use the state to protect this perceived property right through the aggressive exclusion of others.” Baldwin Clark, *Education as Property*, *supra* note 2, at 416.

Moreover, it is unclear that increased criminalization will be desirable. As Professor Baldwin Clark reminds us, “Parents . . . have obligations to their children to provide them with an education, and . . . [they] will do what they can to provide the best education possible to their child.”²⁵⁷ There are undoubtedly immense social benefits for encouraging parents to provide the best education possible to their children.²⁵⁸ There are also significant upsides, or positive externalities, to developing a more educated citizenry even if the educational opportunities are not allocated according to the original intent of the local school districts.²⁵⁹ As the United States Supreme Court declared in *Brown v. Board of Education*: “[E]ducation . . . is required in the performance of our most basic public responsibilities It is the very foundation of good citizenship.”²⁶⁰ In addition, Professors Frischmann and Lemley observe, “Using a work for educational purposes . . . not only benefits the users themselves, but also, in a small way, benefits others in the users’ community with whom users have interdependent relations.”²⁶¹ As if the significant diffused societal benefits generated by education were not enough to tip the balance in a cost–benefit analysis, criminalization can incur considerable social costs, such as the costs of incarceration and rehabilitation as well as reduced child welfare due to criminal sanctions on guilty parents.²⁶² The cost–benefit analysis is therefore more complex than what the advocates for increased criminalization are ready to admit.²⁶³

257. *Id.* at 402.

258. See Frischmann & Lemley, *supra* note 29, at 258 (“Your decision to educate your children well, making them into productive, taxpaying, law-abiding members of society, benefits the people who buy the goods they will produce, the people who will receive the government benefits their taxes fund, and the people they might otherwise have robbed.”).

259. See General Comment No. 13, *supra* note 50, ¶ 1 (“As an empowerment right, education is the primary vehicle by which economically and socially marginalized adults and children can lift themselves out of poverty and obtain the means to participate fully in their communities.”); Coomans, Content and Scope, *supra* note 51, at 185 (noting that education “helps to achieve economic growth, health, poverty reduction, personal development and democracy”); Fons Coomans, In Search of the Core Content of the Right to Education, *in* Core Obligations: Building a Framework for Economic, Social and Cultural Rights 217, 220 (Audrey Chapman & Sage Russell eds., 2002) (“Education enhances social mobility and helps to escape from discrimination based on social status.”); see also Morsink, *supra* note 144, at 214–16 (discussing the importance and benefits of an educated citizenry); Okediji, *supra* note 192, at 488 (“Economic growth is potentiated . . . because knowledge helps to shape the structural conditions in society, making it better equipped to absorb new ideas and to leverage them productively.”). See generally Beiter, Right to Education, *supra* note 74, at 28–30 (discussing the right to education as an empowerment right).

260. 347 U.S. 483, 493 (1952).

261. Frischmann & Lemley, *supra* note 29, at 289.

262. See Harris, *supra* note 2, at 327–32, 335–37.

263. That analysis becomes even more complicated when one takes note of the fact that the costs to one school district can become gains in another. See *id.* at 337 (noting “the societal gain received by the offender’s properly assigned school which enjoyed the offender’s local tax revenues without the costs of educating her child”).

Finally, as attractive as it is for policymakers, legislators, and law enforcement officials to show toughness on so-called “education theft,” there is no need to create new criminal liability based on this emergent concept. There are already laws against fraud in the criminal system and against conversion, trespass to chattel, and misappropriation through civil action.²⁶⁴ One can debate whether those laws need to be reformed in light of the systemic problems and inequities in the existing education system, as well as whether the disenrollment of the nonresident student and restitution to the affected school district would provide sufficient remedies. Regardless of this debate, however, there is already a full arsenal of weapons for those eager to combat so-called “education theft.” There is simply no need to invoke property rhetoric to create new weapons, not to mention the longstanding view held by many that criminal law should only be used as a last resort.²⁶⁵

C. *Exploring Potential Technological Solutions*

Technology has played important roles in the legal system, and law in turn has deeply affected technological development.²⁶⁶ Although commentators have paid growing attention to the interplay between law and technology²⁶⁷ and between law, technology, and society,²⁶⁸ the interplay of law and technology does not receive much attention in the field of property law.

264. See Green, *Thirteen Ways to Steal a Bicycle*, supra note 251, at 134–37 (discussing tortious conversion, conversion, trespass to chattel, and misappropriation).

265. See *id.* at 155–57 (discussing whether criminal sanctions are justified as a last resort); Harris, supra note 2, at 311 (“[T]raditionally, it was rare for school districts to seek criminal charges against parents, opting for disenrollment of the student instead.” (footnote omitted)).

266. See Peter K. Yu, *Teaching International Intellectual Property Law*, 52 *St. Louis U. L.J.* 923, 939 (2008) [hereinafter Yu, *Teaching International IP Law*] (“As [technological and legal] protection[s] interact with each other, and improve over time, they result in a technolegal combination that is often greater than the sum of its parts. It is therefore important to understand not only law and technology, but also the interface between the two.”).

267. See generally Symposium, *Toward a General Theory on Law and Technology*, 8 *Minn. J.L. Sci. & Tech.* 441 (2007) (collecting articles that explore the interplay between law and technology).

268. See, e.g., *Elgar Law, Technology and Society Series*, Edward Elgar Publ’g, <https://www.e-elgar.com/shop/usd/book-series/law-academic/elgar-law-technology-and-society-series.html> [<https://perma.cc/KEQ6-Q3KL>] (last visited Feb. 2, 2023) (providing a list of books in a series focusing on the interplay between law, technology, and society).

A rare exception²⁶⁹ is intellectual property law, which has co-evolved with technology.²⁷⁰ Whether it is the use of technological protection measures or the deployment of artificial intelligence and machine learning, what technology can do will affect how the law is designed, how it operates, and what further adjustments it will require.²⁷¹ The converse is also true. The enacted law will also strengthen or undermine technological development.

Consider, for instance, the laws concerning technological protection measures, such as those technologies requiring users to enter passwords or product keys or limiting access to a certain country or geographical region.²⁷² The growing popularity of the internet in the mid-1990s and the active release of digital content²⁷³ have given rise to the increased deployment of technological protection measures and the enactment of a new law to protect against their circumvention.²⁷⁴ Yet, the overuse of these measures to protect digital content, including educational and cultural content, has provided a justification for the development of new exceptions to support circumvention and the development of circumvention technologies.²⁷⁵

In the area involving so-called “education theft,” the interplay of law and technology can play two important roles. First, it can serve a remedial

269. Another exception is the protection of property rights in the virtual world—and, more recently, the Metaverse. See generally Greg Lastowka, *Virtual Justice: The New Laws of Online Worlds* (2010) (discussing the legal challenges posed by virtual worlds); Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. Rev. 1047 (2005) (advancing a theory of virtual property and identifying its challenges); F. Gregory Lastowka & Dan Hunter, *The Laws of Virtual Worlds*, 92 Calif. L. Rev. 1 (2004) (offering a pioneering article discussing legal issues relating to virtual worlds).

270. See Peter K. Yu, *Marshalling Copyright Knowledge to Understand Four Decades of Berne*, 12 IP Theory, no. 1, 2022, at 59, 69–76 (discussing how the Berne Convention for the Protection of Literary and Artistic Works “has evolved to keep pace with new technology”).

271. See Peter K. Yu, *Artificial Intelligence, the Law-Machine Interface, and Fair Use Automation*, 72 Ala. L. Rev. 187, 214–25 (2020) (discussing the “law-machine interface” in the artificial intelligence context); Yu, *Teaching International IP Law*, supra note 266, at 939 (discussing “technolegal” protections in the context of technological protection measures).

272. See Peter K. Yu, *Region Codes and the Territorial Mess*, 30 Cardozo Arts & Ent. L.J. 187, 192–95 (2012) [hereinafter Yu, *Region Codes*] (discussing DVD region codes).

273. See generally Comm. on Intell. Prop. Rts. & the Emerging Info. Infrastructure, Comput. Sci. & Telecomms. Bd. & Comm’n on Physical Scis., Mathematics, & Applications, Nat’l Rsch. Council, *The Digital Dilemma: Intellectual Property in the Information Age* (2000) (discussing the threat posed by digital technology to the copyright system).

274. 17 U.S.C. § 1201 (2018). See generally Peter K. Yu, *Anticircumvention and Anti-anticircumvention*, 84 Denv. U. L. Rev. 13, 32–40 (2006) (discussing and criticizing the anti-circumvention provision in copyright law).

275. See Peter K. Yu, *A Hater’s Guide to Geoblocking*, 25 B.U. J. Sci. & Tech. L. 503, 519–22 (2019) (discussing the need for the introduction of a geocircumvention exception); Yu, *Region Codes*, supra note 272, at 245–52 (discussing the right to circumvent in the context of DVD region codes).

function by expanding the “pie” of educational opportunities. To the extent that there are inequities that would cause parents to eagerly violate residency requirements in the hope of giving their children better educational opportunities,²⁷⁶ technology can strike the middle ground by increasing the availability and affordability of these opportunities.²⁷⁷ With increased opportunities, parents may see less urgency to enroll children outside their relevant school districts,²⁷⁸ although factors affecting enrollment decisions are diverse and not limited to knowledge acquisition.²⁷⁹

In the past decade, many institutions of higher education have actively offered massive open online courses or more selective interactive online courses²⁸⁰—with MIT and its open courseware being a pioneer in this area.²⁸¹ While these examples focus on higher education, one could easily envision the application of similar approaches to primary and secondary education,²⁸² especially with the help of state and local governments,

276. See *supra* text accompanying note 4.

277. One tricky issue concerns the technology’s ability to empower users to obtain unauthorized access to educational materials and technologies, such as through illegal reproduction or hacking. While one should not condone such activities, the analysis will likely follow the earlier debate about property and education in the intellectual property context. See *supra* section I.B. Indeed, there have been difficult cases in the United States and other parts of the world concerning whether copy shops should be allowed to produce “coursepacks” filled with copyrighted materials. See, e.g., *Princeton Univ. Press v. Mich. Document Servs., Inc.*, 99 F.3d 1381, 1383 (6th Cir. 1996) (finding copyright infringement when a commercial copyshop distributed “coursepacks” that reproduced without authorization substantial segments of copyrighted works); *Basic Books, Inc. v. Kinko’s Graphics Corp.*, 758 F. Supp. 1522, 1526 (S.D.N.Y. 1991) (finding copyright infringement when a document reproduction company sold course “packets” that included without authorization and payment excerpts from copyrighted books); *The Chancellor, Masters & Scholars of the University of Oxford v. Rameshwari Photocopy Services*, 233 (2016) DLT 279, para. 101 (India) (finding non-infringement when a photocopy service sold course packs that compiled without authorization substantial extracts from copyrighted works).

278. There are benefits for parents to keep their children in their school districts, especially if these children are less likely to be bullied or may have better social experiences. Obviously, these experiences vary from district to district. See Harris, *supra* note 2, at 311–15 (discussing the diverse factors affecting enrollment decisions).

279. *Cf. id.*

280. See generally William W. Fisher III, *Lessons from CopyrightX, in Age of Limitations*, *supra* note 192, at 315 (discussing an interactive online copyright course provided through HarvardX); James Grimmelman, *The Merchants of MOOCs*, 44 *Seton Hall L. Rev.* 1035 (2014) (discussing the strengths and weaknesses of massive open online courses).

281. See MIT Open Courseware, MIT, <https://ocw.mit.edu> [<https://perma.cc/CH3U-NVU5>] (last visited Feb. 3, 2023).

282. See, e.g., *Highlights for High School* (MIT OpenCourseWare), MIT, <https://fullsteam.mit.edu/projects/highlights-for-high-school/> [<https://perma.cc/Y7EC-QHCC>] (last visited Mar. 1, 2023) (stating that *Highlights for High School*, a recently ended companion website to MIT OpenCourseWare, “provide[d] open educational resources for high school educators and students” and “contain[ed] an abundance of resources that

charitable foundations, and not-for-profit organizations. To be sure, the provision of these new educational opportunities cannot substitute for the experiences provided by enrollment in preferred educational institutions. Nevertheless, they do reduce the inequities that have contributed to residency requirement violations.

As promising as these online offerings may be, it is important to avoid a deterministic or overly optimistic view that assumes that technology will provide a panacea to the problems raised by these violations.²⁸³ The more residency requirement violations are motivated by the parents' eagerness to ensure the safety of their children, enable these children to avoid harsh school policies, or to obtain material benefits, such as free books and supplies or better meal support,²⁸⁴ the less effective these technological solutions will be. Moreover, as teachers and students learned the hard way during the COVID-19 pandemic, online offerings cannot always substitute for face-to-face teaching, which improves the children's learning experiences while also strengthening their social skills and other non-academic abilities.²⁸⁵

Just as technology can serve a remedial function, it can also exacerbate the situation by further impeding public access to education. For instance, technology can be used to provide or tighten the surveillance instituted to determine whether nonresident students have enrolled in schools or participated in educational programs in violation of the residency requirements. During the COVID-19 pandemic, governments across the world already deployed technology to keep track of citizens and visitors who had tested positive for the virus.²⁸⁶ It is only a matter of time before those eager to combat so-called "education theft" demand the use of similar technology to track students. To the extent that commentators are concerned about the inappropriate surveillance of minority students and their parents or guardians, technology may subject these individuals to even more surveillance.

cover[ed] not only science and mathematics, but also engineering, humanities, and social sciences").

283. Thanks to Professor Rachel Moran for pushing the author to consider these limitations.

284. See Harris, *supra* note 2, at 311–15 (discussing the different motivations behind residency requirement violations).

285. See, e.g., Cory Turner, 6 Things We've Learned About How the Pandemic Disrupted Learning, NPR (June 22, 2022), <https://www.npr.org/2022/06/22/1105970186/pandemic-learning-loss-findings> [<https://perma.cc/B4EW-XNCW>] (discussing the academic toll of the COVID-19 pandemic).

286. For discussions of surveillance during the COVID-19 pandemic, see generally David Lyon, *Pandemic Surveillance* (2022); *Pandemic Surveillance: Privacy, Security, and Data Ethics* (Margaret Hu ed., 2022); Jennifer D. Oliva, *Surveillance, Privacy, and App Tracking*, in *Assessing Legal Responses to COVID-19* 40 (Scott Burris, Sarah de Guia, Lance Gable, Donna E. Levin, Wendy E. Parmet & Nicolas P. Terry eds., 2020).

Technology can also be used to close off online educational opportunities to nonresident students the same way these students are denied access to offline opportunities. As if the lack of access were not bad enough, unauthorized access to online educational materials and technologies could attract not only intellectual property infringement lawsuits but also criminal prosecution under the Computer Fraud and Abuse Act.²⁸⁷ To the dismay of legal commentators and consumer advocates, this statute, which was originally enacted to tackle computer hacking, has now been broadly used in contexts involving the alleged misuse of computing technology or the internet.²⁸⁸ The overzealous prosecution under this statute has also led legislators and commentators to call for reform.²⁸⁹

The second role technology can play is the mediating function. The availability of technology-enhanced educational opportunities helps courts, policymakers, and commentators determine why residency requirement violations occur and enables them to design appropriate remedies. When educational opportunities become widely available to the public online, such availability makes the perpetrator's actions less excusable. By contrast, when those opportunities are unavailable—or available but difficult to access—it is understandable, though not always excusable, that those parents who want their children to be better educated will look for ways to obtain the cherished educational arrangements. To some extent, the availability of online courses or other technology-enabled educational opportunities can be used as either an aggravating or mitigating factor for determining the perpetrator's culpability and the appropriate remedy. In considering whether to charge or arrest a perpetrator, prosecutors and law enforcement officials can also take these opportunities into account.

Nevertheless, judges and law enforcement officials need to be cautious when they use the availability of technology-enhanced educational opportunities as an aggravating factor. Just because those opportunities are available does not mean that nonresident students will have ready access. Commentators have widely discussed the problems raised by the digital divide,²⁹⁰ which is defined as the proverbial gap

287. 18 U.S.C. § 1030 (2018).

288. See generally Symposium, *Hacking Into the Computer Fraud and Abuse Act: The CFAA at 30*, 84 *Geo. Wash. L. Rev.* 1437 (2016) (collecting articles that discuss and critique the Computer Fraud and Abuse Act).

289. See, e.g., H.R. 2454, 113th Cong. (2013). Titled “Aaron’s Law,” this bill was introduced following the suicide of internet activist Aaron Swartz, who was criminally prosecuted under the statute. See generally Justin Peters, *The Idealist: Aaron Swartz and the Rise of Free Culture on the Internet* (2016) (discussing the life of Aaron Swartz in relation to the internet free culture movement).

290. See Peter K. Yu, *The Algorithmic Divide and Equality in the Age of Artificial Intelligence*, 72 *Fla. L. Rev.* 331, 337 nn.17–19 (2020) [hereinafter Yu, *Algorithmic Divide*]

between “those with access to the Internet, information technology, and digital content from those without.”²⁹¹ This gap is particularly pronounced in marginalized and disadvantaged communities, with commentators lamenting the linkage between race and class on the one hand and unequal access to communications technology and digital contents on the other.²⁹² The lack of access to such technology can greatly limit the nonresident students’ access to online educational opportunities.

CONCLUSION

“Education theft” is a new property-based label attached to the misappropriation of educational opportunities by those who do not belong to the relevant school districts. Yet, who belongs is a sociopolitical issue that is subject to endless debate.²⁹³ As this Essay has shown, in both the intellectual property and human rights contexts, what is seen as education theft by one segment of the population can often be seen by another as the provision of educational opportunities.²⁹⁴ This dual perspective brings to mind Pierre-Joseph Proudhon’s slogan “La propriété, c’est le vol!” which is sometimes translated as “Property is theft!” or “Property is robbery!”²⁹⁵ Although this Essay does not go so far as to equate property with theft, it does show that, in the educational context, what some consider as property may be viewed by others as theft, and vice versa. Understanding this dual perspective will be important to the debate on property and education—and, in turn, the debate on “education theft.”²⁹⁶

(collecting sources that discuss the digital divide). See generally Peter K. Yu, *Bridging the Digital Divide: Equality in the Information Age*, 20 *Cardozo Arts & Ent. L.J.* 1 (2002) (providing an overview of the digital divide and discussing the divide at both the domestic and global levels).

291. Yu, *Algorithmic Divide*, *supra* note 290, at 334.

292. See generally Raneta Lawson Mack, *The Digital Divide: Standing at the Intersection of Race & Technology* (2001) (discussing the relationship between the digital divide and racialized social, economic, and educational segregation).

293. See, e.g., LaToya Baldwin Clark, *Whose Child Is This? Exclusion, Inclusion, and Belonging*, 123 *Colum. L. Rev.* 1201, 1215–20 (2023) (discussing how claims to educational property go beyond access and exclusion and implicate property as belonging).

294. The same can be said about intellectual property. See Peter Jaszi, *A Garland of Reflections on Three International Copyright Topics*, 8 *Cardozo Arts & Ent. L.J.* 47, 63 (1989) (“One might say that one nation’s ‘piracy[]’ is another man’s ‘technology transfer.’”).

295. Pierre-Joseph Proudhon, *What Is Property? An Inquiry Into the Principle of Right and of Government* 12 (Benjamin R. Tucker trans., Dover Publ’ns 1970) (1840). Professor Madhavi Sunder has a forthcoming work discussing intellectual property as theft. Madhavi Sunder, *Intellectual Property Is Theft!* (Feb. 2022) (unpublished manuscript) (on file with author).

296. This type of perspective is not uncommon when one engages in correlative thinking. See generally Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as*

Although policymakers, legislators, and law enforcement officials have thus far defined the latter debate quite narrowly, that debate can be easily broadened to cover the “theft” of all educational opportunities, especially from members of marginalized and disadvantaged communities. By drawing insights from the debate on property and education in both the intellectual property and human rights contexts, this Essay problematizes the increased propertization and commodification of education while calling for a rethink of the emergent concept of “education theft.” It shows that reforms can be undertaken both inside and outside the property regime and have been advanced in intellectual property, human rights, and other contexts. Understanding these myriad reforms and their limitations will help inform the future engagement with the debate on the “theft” of educational opportunities.

Applied in Judicial Reasoning (David Campbell & Philip Thomas eds., Ashgate 2001) (1919) (applying correlative thinking to explore judicial reasoning); Joshua E. Weishart, Reconstituting the Right to Education, 67 Ala. L. Rev. 915 (2016) (providing a Hohfeldian analysis of the right to education); Peter K. Yu, Intellectual Property, Asian Philosophy and the Yin-Yang School, 7 WIPO J. 1, 7–10 (2015) (discussing correlative thinking in the Yin-Yang school of Chinese philosophy).

