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INTELLECTUAL PROPERTY AND THE MYTH OF NONRIVALRY

*James Y. Stern**

The concept of rivalry is central to modern accounts of property. When one person's use of a resource is incompatible with another's, a system of rights to determine its use may be necessary. It is commonly asserted, however, that informational goods like inventions and expressive works are nonrivalrous and that intellectual property rights must therefore be subject to special limitation, if they should even exist at all.

This Article examines the idea of rivalry more closely and makes a series of claims about the analysis of rivalrousness for purposes of such arguments. Within that framework, it argues that rivalry should be understood as a function of the extent that any one person's desires with respect to the disposition of a given resource are incompatible with the desires of others, and it criticizes the assumption that rivalrousness should only concern clashes between two people's desire to make active use of the same resource. In a range of contexts, such as land conservation or ideological disagreement, conflicts arise because one person wants to use a resource and another simply wants that person to refrain from doing so.

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This Article then applies this understanding to intellectual property. It shows that although the notion that information goods are nonrivalrous is treated as a statement of self-evident fact, the basic claim depends upon either unsubstantiated, and often improbable, empirical assumptions about individual preferences or, more likely, a substantial element of normative judgment about different motivations to restrict use. Ideas and information can generate the sort of conflicts property law exists to mediate, and if the law should generally favor rights to use over rights to withhold access, more than a reflexive invocation of nonrivalry is needed to explain why. The rivalrousness of informational goods is apparent in many contexts ranging from trademarks to privacy to digital assets like cryptocurrency, and the potential for rivalry remains for other objects of intellectual property protection like inventions and expressive works. In borrowing from the conceptual vocabulary of public goods economics, the literature on intellectual property has tended to mischaracterize and conflate different public goods issues, thereby obscuring the nature of the conditions that might justify or undermine rights in information goods. This Article concludes by looking at ways these insights bear upon several specific legal problems, such as copyright's fair-use doctrine, remedies for IP infringement, and the question of whether copying information constitutes a seizure for Fourth Amendment purposes.

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INTRODUCTION

Not long after announcing his bid for President in 2015, then-candidate Donald Trump received a cease-and-desist letter from lawyers representing rock star Steven Tyler, demanding that Trump stop playing the song “Dream On” at campaign rallies.¹ This was not an isolated incident. Numerous musicians—including Adele,² Neil Young,³ R.E.M.,⁴ the Rolling Stones,⁵ and Elton John⁶—complained about Trump’s use of their music. Protests even sounded from beyond the grave, with the estate of George Harrison⁷ and the family of Luciano Pavarotti⁸ getting in on the game. The objections, at least from the living, were strongly felt.⁹ “Do not use our music or my voice for your moronic charade of a campaign,” tweeted R.E.M. front man Michael Stipe, in one of his more restrained statements.¹⁰

1 See Eriq Gardner, *Donald Trump Receives Legal Threat over Use of Aerosmith’s “Dream On”*, HOLLYWOOD REP. (Oct. 11, 2015, 7:38 AM), <https://www.hollywoodreporter.com/business/business-news/donald-trump-receives-legal-threat-831233/> [https://perma.cc/68PR-Z9MM].

2 See Jeremy Diamond, *Adele: Donald Trump Doesn’t Have Permission to Use My Music*, CNN (Feb. 1, 2016, 12:35 PM), <https://www.cnn.com/2016/02/01/politics/adele-donald-trump-music> [https://perma.cc/CVT4-Z6LS].

3 See Jethro Nededog, *Neil Young Explains Why He Refused to Let Donald Trump Use His Song*, BUS. INSIDER (May 27, 2016, 11:21 AM), <https://www.businessinsider.com/neil-young-on-donald-trump-2016-5> [https://perma.cc/GM9B-TU8A].

4 See Ryan Gajewski, *R.E.M. Slams Donald Trump for Using Their Song in “Moronic Charade of a Campaign”*, HOLLYWOOD REP. (Sept. 9, 2015, 5:50 PM), <https://www.hollywoodreporter.com/news/general-news/rem-slams-donald-trump-using-821609/> [https://perma.cc/42FM-2DK9].

5 See Tom Bryant, *Rolling Stones Row with Donald Trump Escalates into Bitter Legal Dispute*, MIRROR (Oct. 18, 2016, 2:56 AM), <https://www.mirror.co.uk/3am/celebrity-news/rolling-stones-row-donald-trump-9048836> [https://perma.cc/UP5W-473E].

6 See *Elton John Says No to Donald Trump*, N.Z. HERALD (Feb. 3, 2016, 12:00 AM), <https://www.nzherald.co.nz/entertainment/elton-john-says-no-to-donald-trump/VWAH73OU2KANENIQDFQD7TZD4U/> [https://perma.cc/G3WR-LSA5].

7 See Daniel Kreps, *George Harrison Estate Blasts Trump’s ‘Here Comes the Sun’ Use at RNC*, ROLLING STONE (July 22, 2016), <https://www.rollingstone.com/music/music-news/george-harrison-estate-blasts-trumps-here-comes-the-sun-use-at-rnc-113571/> [https://perma.cc/Q5GX-XPJW].

8 See Steve Scherer, *Pavarotti’s Family Tells Trump to Stop Using Beloved Aria*, REUTERS (July 21, 2016, 4:25 PM), <https://www.reuters.com/article/idUSKCN1012SZ/> [https://perma.cc/L35Z-MM74].

9 Complaints have also been voiced by creators of visual artworks owned by Ivanka Trump that have appeared in photographs of her apartment on Instagram. See Brooke Seipel, *Artists Launch Protest, Ask Ivanka to Take Down Their Work*, HILL: IN THE KNOW (Dec. 22, 2016, 10:58 AM), <https://thehill.com/blogs/in-the-know/in-the-know/311496-artists-want-ivanka-to-remove-their-artwork-from-her-house/> [https://perma.cc/UM6L-3QAH].

10 See Jason Newman, *R.E.M. to Trump, Other Pols: ‘Go F–k Yourself’ for Using Our Music*, ROLLING STONE (Sept. 10, 2015), <https://www.rollingstone.com/politics/politics-news/r-e-m-to-trump-other-pols-go-f-k-yourself-for-using-our-music-33452/> [https://perma.cc/

How the law should respond to such clashes is surely a matter of theoretical and practical interest—and not just where political campaigns are concerned.¹¹ Donald Trump’s run-ins with celebrity musicians, while colorful, are in reality the tip of a much larger legal iceberg. Like all resources, ideas and information give rise to conflicting interests and preferences when it comes to deciding how they will be used and by whom. Strangely, however, such conflicts are largely invisible in standard accounts of intellectual property (IP). The dominant view of IP in the academic literature has little to say in response to problems of opposing desires about the use of information goods, more or less resolving such conflicts by concluding there is in effect no real conflict to resolve.¹² Why this is so and how it distorts our understanding of intellectual property law is the subject of this Article.

The place to begin is with the idea of rivalrousness. In conventional accounts, rivalrousness is the alpha and omega of property. The institution of property comes into being because goods are rivalrous¹³ or, what is much the same thing, scarce.¹⁴ The terminology of rivalry is borrowed from the economic literature on public goods, although the idea is often invoked in a more conceptual sense for what are in some ways different purposes. Broadly speaking, a good is said to be rivalrous if one person’s consumption diminishes the ability of others to consume it.¹⁵ In essence, property is a response to rivalrousness. It

/Z8YY-6PPH]. Meanwhile, Elton John wondered aloud, “Why not ask Ted f[—]ing Nugent? Or one of those f[—]ing country stars? They’ll do it for you.” See Alexis Petridis, *Elton John: ‘Our Kids Aren’t Stuck in a Mansion. We Go to Pizza Hut’*, GUARDIAN (Feb. 7, 2016, 10:00 AM), <https://www.theguardian.com/music/2016/feb/07/elton-john-i-really-hate-the-cult-of-celebrity> [<https://perma.cc/9GQG-MP7M>].

11 See, e.g., Sarah Schacter, Note, *The Barracuda Lacuna: Music, Political Campaigns, and the First Amendment*, 99 GEO. L.J. 571 (2011); see also sources collected *infra* note 110.

12 See *infra* Sections I.C, II.B.

13 It is technically more proper to say that the *consumption* of a good is (non)rivalrous, but for simplicity’s sake, this Article will largely follow the common practice of applying the term to the goods themselves. Phrased in terms of consumption, the core thesis of this Article is that consumption should be understood to include any benefits or preferences deriving from others’ nonuse or, alternatively, that rivalrousness in consumption alone is not an adequate criterion for assessing whether the essential predicate for a system of intellectual property rights is present.

14 See LAWRENCE C. BECKER, PROPERTY RIGHTS: PHILOSOPHIC FOUNDATIONS 6 (1977); Abraham Bell & Gideon Parchomovsky, *A Theory of Property*, 90 CORNELL L. REV. 531, 536, 577–78 (2005). Scarcity and rivalry suggest slightly different meanings, but references to the problem of scarcity typically presuppose rivalrousness. See Mark Cooper, *From WiFi to Wikis and Open Source: The Political Economy of Collaborative Production in the Digital Information Age*, 5 TELECOMMS. & HIGH TECH. L. 125, 129 (2006) (“In the neoclassical paradigm, scarcity is about rivalry . . .”).

15 See N. GREGORY MANKIW, PRINCIPLES OF ECONOMICS 216 (7th ed. 2015) (describing rivalrousness in consumption as “the property of a good whereby one person’s use diminishes other people’s use”); see also Paul A. Samuelson, *The Pure Theory of Public Expenditure*,

is a system to determine who gets what, given that everyone cannot have everything.

This understanding is said to make “intellectual property” something of a misnomer. No tenet is more central to orthodox thinking about intellectual property than the proposition that information and ideas—unlike tangible goods—are nonrivalrous.¹⁶ Two people cannot wear the same sock (at least at the same time) but they can think the same thought, sing the same song, or undergo the same medical procedure. As Thomas Jefferson famously put it, part of the “peculiar character” of an idea is that “no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.”¹⁷

It isn’t hard to see where this leads. If property is a response to rivalry, and information goods are not rivalrous, then property is conceptually inapposite for information goods.¹⁸ As a result, IP rights are generally viewed in a suspect light—possibly justifiable on instrumental grounds, as an incentive to develop and disseminate ideas and information, but grounds that must be examined with considerable

36 REV. ECON. & STAT. 387, 387 (1954) (discussing “collective consumption goods” for which an “individual’s consumption of . . . a good leads to no subtraction from any other individual’s consumption of that good”).

16 See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 20, 37–165, 294–333 (2003); Barton Beebe, *Intellectual Property Law and the Sumptuary Code*, 123 HARV. L. REV. 809, 825–26, 840 (2010); Abraham Bell & Gideon Parchomovsky, *Pliability Rules*, 101 MICH. L. REV. 1, 40 (2002); Dan L. Burk, *Law and Economics of Intellectual Property: In Search of First Principles*, 8 ANN. REV. L. & SOC. SCI. 397, 406 (2012); Michael A. Carrier, *Unraveling the Patent-Antitrust Paradox*, 150 U. PA. L. REV. 761, 767 (2002); James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882, 932 (2007); Dennis S. Karjala, *Congestion Externalities and Extended Copyright Protection*, 94 GEO. L.J. 1065, 1066 (2006); Glen O. Robinson, *Personal Property Servitudes*, 71 U. CHI. L. REV. 1449, 1462 (2004); Madhavi Sunder, *IP³*, 59 STAN. L. REV. 257, 283 (2006); R. Polk Wagner, Essay, *Information Wants to Be Free: Intellectual Property and the Mythologies of Control*, 103 COLUM. L. REV. 995, 999 (2003).

17 Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), in 13 THE WRITINGS OF THOMAS JEFFERSON 326, 333–34 (Albert Ellery Bergh ed., 1907).

18 See C. Edwin Baker, *First Amendment Limits on Copyright*, 55 VAND. L. REV. 891, 907 (2002) (stating that “[i]ntellectual property’s commonly observed public goods quality—namely that use of intellectual property is ‘nonrivalrous’—means that neither creating a monopoly in one person, even if economically justified, nor creating any other legal allocation is conceptually necessary”); Shyamkrishna Balganesh, *Debunking Blackstonian Copyright*, 118 YALE L.J. 1126, 1137–38 (2009) (book review); Oren Bracha, *Give Us Back Our Tragedy: Nonrivalry in Intellectual Property Law and Policy*, 19 THEORETICAL INQUIRIES L. 633, 641 (2018); Wagner, *supra* note 16, at 999 (stating that “[a]s virtually everyone acknowledges, the nonexcludable and nonrival nature of information commands a different justification for intellectual property than for real property”); see also Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1758 (2007).

skepticism.¹⁹ A strong tension pervades the dominant justificatory accounts of intellectual property, with any argument in favor balanced against a background presumption that IP rights are out of place because the consumption of ideas and information is nonrivalrous. This tension is expressed in the widespread trope of IP law's access-incentives trade-off.²⁰

While the position is commonly articulated in terms of analogies (or rather, disanalogies) to physical property, it also appears in other forms. A good deal of intellectual property scholarship incorporates a self-consciously economic mode of analysis. In these accounts, non-rivalry is generally modeled to mean that the marginal cost of allowing additional consumption of information goods is either low or zero, and because intellectual property rights can enable pricing above marginal cost, they lead to deadweight loss—that is, an inefficient allocation of resources.²¹ The argument is also advanced as a matter of common-sense reasoning, without recourse to property concepts or economic constructs: because one person can consume an information good without lessening anyone else's ability to do likewise, the argument goes, we do not need to restrict one person's access in order to protect someone else's. Ideas and information are infinitely shareable.

These assertions contain an important element of truth. But the proposition that consumption of information goods is categorically nonrivalrous is categorically false. And the more qualified suggestion that consumption is *largely* nonrivalrous, and that intellectual property is therefore the fraught undertaking described above, is far more contestable than the prevailing orthodoxy admits. In recent years, there has been a limited recognition from some quarters of the potential for information goods to generate conflict. Economists generally hold that rivalrousness is a matter of degree and few real-world goods, if any, are perfectly nonrivalrous.²² Within the intellectual property literature, some scholars have noted the possibility of what are referred to as congestion effects: situations where at some point additional

19 See, e.g., Edwin C. Hettinger, *Justifying Intellectual Property*, in INTELLECTUAL PROPERTY: MORAL, LEGAL, AND INTERNATIONAL DILEMMAS 17, 20–21 (Adam D. Moore ed., 1997).

20 See, e.g., LANDES & POSNER, *supra* note 16, at 11; David W. Barnes, *The Incentives/Access Tradeoff*, 9 NW. J. TECH. & INTELL. PROP. 96, 96–97 (2010); see also Oren Bracha & Talha Syed, *Beyond the Incentive-Access Paradigm? Product Differentiation & Copyright Revisited*, 92 TEX. L. REV. 1841, 1843 (2014).

21 See, e.g., Matthew Sag, *Copyright and Copy-Reliant Technology*, 103 NW. U. L. REV. 1607, 1614 (2009) (arguing that “[m]arket allocation of scarce resources to their highest valued use is usually welfare enhancing, but for nonrivalrous goods, the exclusion of low-value users produces a deadweight loss because their consumption is not at the expense of another who values the good more”); see also discussion *infra* Section II.C.

22 See generally RICHARD CORNES & TODD SANDLER, *THE THEORY OF EXTERNALITIES, PUBLIC GOODS, AND CLUB GOODS* (2d ed. 1996).

consumers of the same good detract from the enjoyment others derive from it.²³ A song might be overplayed, perhaps, much as a highway at some point might become overcrowded.²⁴

This limited challenge to the nonrivalry story, however, is only the beginning. From the standpoint of property theory, the essential phenomenon that supports the concept of property is conflict over resources. When ideas and information are said to be nonrivalrous, what is meant is that they do not implicate property law's conflict-mediating function because one person's use of such an information good doesn't diminish anyone else's ability to do the same. That, however, frames the problem too narrowly. While limitations on the capacity of a resource to support multiple equivalent uses—depletion or congestion—are certainly an important source of conflict, they are by no means the only ones. A good can also beget conflict because one person wants to use it and another simply wants that person *not* to use it, even if the other person does not wish to use it herself in any active, affirmative sense. In economic terminology, the implication of assertions that the marginal cost of consuming information is zero and that IP rights therefore *necessarily* result in static deadweight loss is that consumption entails no negative externalities.²⁵ But while that may often be true so far as other people's consumption opportunities are concerned, it is altogether possible that consumption will entail *other* sorts of negative external effects. In the standard telling, nonrivalry essentially means that for an existing informational good, both the (re)production and the consumption are effectively costless; in reality, the use of any given informational good may impose substantial costs on others, and, moreover, those costs may outweigh the value that the user derives.

In the world of tangible property, conflicts between use and nonuse are familiar. Someone might wish to see property go unused because she favors nonuse as an end in itself—think of land conservation,

23 See, e.g., LANDES & POSNER, *supra* note 16, at 14, 223–28; see also Beebe, *supra* note 16, at 825–26.

24 Arguments have also been advanced in support of IP rights on the theory that awards of exclusivity early in the process of development facilitate commercialization and other forms of development, most notably in the “prospect” theory of patents. See Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 271, 272 tbl.1 (1977); see also Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341, 346 (2010).

25 Indeed, it suggests there are no negative external costs—no harms—at all, even if they are not counted as externalities. Compare R.H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 24 (1988) (defining externality as “the effect of one person's decision on someone who is not a party to that decision”), with Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 348 (1967) (“What converts a harmful or beneficial effect into an externality is that the cost of bringing the effect to bear on the decisions of one or more of the interacting persons is too high to make it worthwhile . . .”).

for instance—or because she disapproves of a more specific use, as when the manufacturer of the Cards Against Humanity game bought land near the U.S.-Mexican border solely to prevent construction of a wall by the U.S. government.²⁶ Or someone might wish to deny a particular person access to a resource because she opposes a cause that person more generally seeks to advance,²⁷ or perhaps because she simply does not like the person. It is also the case that property held for investment or commercial purposes by rights holders with no desire to consume the resources themselves is ubiquitous.²⁸ Rivalrousness in the sense relevant to the standard critical position on intellectual property rights centers on resource conflicts, and resource conflicts arise whenever two people disagree on how a resource should be used, including when one person wants to use a resource and another wants that person to refrain from doing so.

Understood this way, information goods are not intrinsically less rivalrous than tangible objects, physical space, or other “things” to which legal systems attach property rights. They are at least capable of generating the kind of conflicts that property systems exist to mediate. In economic terms, it is possible for one person’s use of an information good to produce negative external effects on others—including, it must be stressed, effects wholly unrelated to congestion dynamics. And while the claim of nonrivalry might nevertheless be defended if it were clear that conflicts over the use of ideas and information seldom arise in real life, that simply is not the case. The dustups involving Donald Trump’s musical choices are not at all unusual; examples of situations in which one person would prefer that another not make use of a particular idea or piece of information are legion.²⁹ These preferences may be grounded in political ideology, fear of material harms, style and taste, privacy, reputation, artistic sensibility, personal relationships, cantankerousness, religious belief, economic self-interest, or any number of other familiar human motivations.

Rather than assumptions about the existence of these preferences, it seems instead that conventional discussions of the rivalrousness of IP goods incorporate important but unstated normative premises that constrain the analysis by treating such preferences as suspect,

26 See Aaron Smith, *Cards Against Humanity Buys Land on Mexican Border to Stump Trump’s Wall Plan*, CNN (Nov. 16, 2017, 12:53 AM), <https://www.cnn.com/2017/11/15/us/cards-against-humanity-land-grab-trnd> [<https://perma.cc/T5HU-ZL3B>].

27 See Katharine Q. Seelye, *Think AR-15s Are O.K.? You’re Not Welcome Here*, N.Y. TIMES, Aug. 2, 2016, at A10; cf. *Frisby v. Schultz*, 487 U.S. 474, 485 (1988) (denying right to use property of others for expressive purposes).

28 The argument developed in this Article sets aside purely pecuniary preferences. See *infra* note 111.

29 See *infra* Section II.B.

or perhaps even illegitimate. These constraints may or may not be justified, but at the very least, they should be acknowledged. More than that, however, they are in tension with the utilitarian and instrumentalist perspective that overwhelmingly predominates American IP scholarship. To the extent intellectual property law is evaluated in terms of preference-satisfaction, it appears some preferences are implicitly excluded from consideration because they command little or no normative respect. This might well be justified, but reflexive invocation of nonrivalrousness tends to suggest that no justification is needed because there is nothing to justify. Intellectual property law cannot so easily sidestep the hard choices that resource conflicts generate, however. The nonrivalry story distracts attention from the real work that must be done to ascertain the uncertain limits of the principles that drive these intuitions.

Besides a general theoretical reorientation, recognition of the potential for rivalrousness in the realm of information goods suggests new ways to think about a variety of issues arising in intellectual property and related fields. This Article explores a few of these, including the role of moral rights and fair use in copyright law, privacy interests and the question of whether copying information should be considered a Fourth Amendment “seizure,” just compensation for IP takings, separation-of-powers concerns related to recent patent reforms, and the interpretation of legal provisions such as the Constitution’s Patent and Copyright Clause. The primary focus of the analysis, however, is on the nature of ideas and information, rather than any particular doctrinal configurations.

Given the subject matter, it is important to be clear up front about what this Article does not say. It does not argue that intellectual property rights “just are” property rights, or that it is generally helpful to think of them as property. Plenty of voices have joined that debate already.³⁰ Rather, this Article seeks to refute an assertion about the

30 See, e.g., Andrew Beckerman-Rodau, *Patents Are Property: A Fundamental but Important Concept*, 4 J. BUS. & TECH. L. 87 (2009); Tom W. Bell, *Authors’ Welfare: Copyright as a Statutory Mechanism for Redistributing Rights*, 69 BROOK. L. REV. 229, 256–59 (2003); Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1 (2004); Stephen L. Carter, *Does It Matter Whether Intellectual Property Is Property?*, 68 CHI.-KENT L. REV. 715 (1993); John F. Duffy, Comment, *Intellectual Property Isolationism and the Average Cost Thesis*, 83 TEX. L. REV. 1077 (2005); Frank H. Easterbrook, *Intellectual Property Is Still Property*, 13 HARV. J.L. & PUB. POL’Y 108 (1990); Richard A. Epstein, *Liberty Versus Property? Cracks in the Foundations of Copyright Law*, 42 SAN DIEGO L. REV. 1 (2005); Shubha Ghosh, *Deprivatizing Copyright*, 54 CASE W. RESV. L. REV. 387 (2003); Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343 (1989); Trotter Hardy, *Property (and Copyright) in Cyberspace*, 1996 U. CHI. LEGAL F. 217; F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697 (2001); Edmund W. Kitch, *Patents: Monopolies or Property Rights?*, 8 RSCH. L. &

nature of ideas and information and the widespread view that in one critical respect IP rights are conceptually dissimilar from traditional property rights in a way that defeats analogies to them. Nor does this Article attempt to determine whether IP rights are in fact a good thing, in general or even ever. Rather, it calls into question certain unstated assumptions about the circumstances in which IP rights are presumed to be bad. Those assumptions might ultimately be correct, either on empirical grounds or for reasons of moral theory—but they have not been shown to be, and so, in a sense, the real action takes place off-stage.³¹ It is important to remain vigilant in policing the proper bounds of intellectual property law, but in doing so, it is important to understand what those boundaries really are.

This Article proceeds in three Parts. The first sets out the standard claims about rivalrousness in property law and intellectual property. The second shows why discussions of rivalrousness in these critiques should accommodate the idea of resource conflict, including disputes over whether one person should be allowed to use a resource when another wishes them to refrain from doing so. It argues that on this understanding, information goods are not significantly lacking in rivalrousness (or alternatively, that if they are, then the conclusions generally treated as following axiomatically from that characterization are far more questionable). The third Part of this Article considers some implications for particular problems involving information goods in intellectual property and related fields.

ECON. 31 (1986); Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031 (2005); Peter S. Menell, *The Property Rights Movement's Embrace of Intellectual Property: True Love or Doomed Relationship?*, 34 ECOLOGY L.Q. 713 (2007); Adam D. Moore, *A Lockean Theory of Intellectual Property*, 21 HAMLINE L. REV. 65, 78–86 (1997); Adam Mossoff, *Is Copyright Property?*, 42 SAN DIEGO L. REV. 29 (2005); Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283 (1996); Arti Kaur Rai, *Evolving Scientific Norms and Intellectual Property Rights: A Reply to Kieff*, 95 NW. U. L. REV. 707 (2001); Pamela Samuelson, *Information as Property: Do Ruckelshaus and Carpenter Signal a Changing Direction in Intellectual Property Law?*, 38 CATH. U. L. REV. 365 (1989); Paul M. Schwartz & William Michael Treanor, Eldred and Lochner: *Copyright Term Extension and Intellectual Property as Constitutional Property*, 112 YALE L.J. 2331 (2003); Smith, *supra* note 18; Wagner, *supra* note 16.

31 This is not to suggest a complete absence of any normative analysis of conflicting nonpecuniary preferences regarding the use of information goods, but that the analysis is not incorporated into the widespread orthodoxy of nonrivalry.

I. THE CONVENTIONAL STORY

A. *Rivalry, Private Goods, and Private Property*

Modern thinking about property begins with the idea of resource conflicts.³² An apple grows on a tree. Arnold and Betty both want to eat it. Plainly, their demands upon the apple are incompatible. There are a variety of different solutions to their conflict: the apple might be taken and eaten by Arnold, or it might be taken and eaten by Betty, or it might be split between them. Actually, it is not quite accurate to say there are multiple solutions to the conflict. There are no true solutions, only resolutions. There are decisions that produce outcomes of one sort or another, but those outcomes are necessarily compromises. It just is not possible to give both Arnold and Betty all of what they want. The simple, inescapable fact is that they cannot both eat the whole apple.³³

Absent a system of property norms, the conflict between Arnold and Betty could be resolved on the basis of *might makes right*, within the constraints of whatever rights to be free from physical harm are otherwise in place,³⁴ or perhaps by some sort of agreement between Arnold and Betty. Property represents a different response. It supplies a normative principle³⁵ that establishes the priority of claims to control the apple and determine its use. This type of response is, quite simply, the essence of property.³⁶ Property arises because the apple cannot be eaten by both Arnold and Betty; it arises, in other words, because the apple is rivalrous.

32 See Daniel Fitzpatrick, Essay, *Evolution and Chaos in Property Rights Systems: The Third World Tragedy of Contested Access*, 115 YALE L.J. 996, 1008 (2006) (stating that “property rights are both a result and a cause of resource conflicts”); Henry E. Smith, *The Persistence of System in Property Law*, 163 U. PA. L. REV. 2055, 2057 (2015) (“Property law coordinates activities and resolves conflict between members of society over external resources.”).

33 The picture of rivalry described in the Arnold-Betty story centers on conflicting desires or preferences with respect to the disposition of resources, but the idea can be adapted to other sorts of conflicts as well. The apple could be considered rivalrous not because Arnold and Betty both want to eat it but because they would both derive utility from eating it or because it would be objectively good, however defined, for each of them to eat it, regardless of their subjective attitudes or psychological states.

34 See ARTHUR RIPSTEIN, *FORCE AND FREEDOM: KANT’S LEGAL AND POLITICAL PHILOSOPHY* 94 (2009) (contrasting protection afforded by property rights with protection of physical possession through rights against personal interference).

35 Normative in the sense used here can refer to external morality, or to positive legal rules enforced by the government authorities, or to informal conventions regarding proper conduct—in short, guiding norms.

36 See James Y. Stern, *The Essential Structure of Property Law*, 115 MICH. L. REV. 1167, 1168 (2017); see also BRETT M. FRISCHMANN, *INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES* 27 (2012) (discussing rivalrousness of an apple and articulating the view that “[s]ince the apple is rivalrous, we *must* allocate it exclusively to one person”).

Though this might sound like an account grounded in efficiency concerns, the problem of resource conflict is more basic than that and does not itself imply any particular moral framework. It simply presupposes that where there are conflicting demands to determine what is done with a resource, a set of rules to resolve the conflict might be appropriate. If such rules are indeed to be produced, it stands to reason that we should prefer the most normatively attractive version, which might or might not be based on efficiency. The rules could be structured to prefer Betty over Arnold because she is the higher-valuing user, but also because doing so is consistent with the philosophy of Lockean natural right, Kantian freedom, or Hegelian personality. The point is that resource conflict is a basic question to which any property system is a response. Having said this, however, since commentary on intellectual property in the United States generally assumes what is often referred to as a utilitarian or economic perspective, the discussion that follows will devote special attention to views of IP grounded in efficiency and preference satisfaction.

B. *Nonrivalry and Public Goods*

The language of rivalry and rivalrousness originates in the economic literature on public goods,³⁷ and because this scholarship is often misunderstood, a quick overview is in order. Public goods economics is concerned less with rivalry than with its absence—with goods that are “public” rather than “private.” National defense, lighthouses, and fireworks displays are stock examples. Early attempts to understand the subject started from the assumption that public goods could only be supplied by public institutions—i.e., government—and while that supposition has since been qualified, the focus on governmental action helpfully reflects the reasons for the study of public goods as a distinct economic phenomenon.³⁸ Public goods are said to possess certain features that frustrate the usual mechanisms of private ordering. Even in conditions of perfect competition, the thinking goes, private markets will generally fail to supply these goods at optimal levels. Why is this so? What’s so special about lighthouses, fireworks, and national defense?

37 The term was coined by Richard Musgrave. See R.A. Musgrave, *Provision for Social Goods*, in PUBLIC ECONOMICS: AN ANALYSIS OF PUBLIC PRODUCTION AND CONSUMPTION AND THEIR RELATIONS TO THE PRIVATE SECTORS 124, 126–29 (J. Margolis & H. Guitton eds., 1969); see also Samuelson, *supra* note 15, at 387 (defining “collective consumption goods” as those “which all enjoy in common in the sense that each individual’s consumption of such a good leads to no subtraction from any other individual’s consumption of that good”).

38 See FRISCHMANN, *supra* note 36, at 25 (noting that characteristics of public goods as commonly defined are independent of the source providing such goods).

Pure public goods are generally said to have two key characteristics that distinguish them from ordinary private goods: nonexcludability and nonrivalry. In essence, nonexcludability means the cost of restricting others' access to the resource is prohibitively high.³⁹ Once a lighthouse is illuminated, it is very difficult to prevent ships from taking advantage of its beam and thus to charge them for the benefit they receive.⁴⁰ Nonrivalry will take more unpacking, but the basic idea is that public goods can be enjoyed by more than one person. In contrast to a private good like the apple Arnold and Betty were fighting over, two different ships can both use the same lighthouse beam to navigate.

Despite widespread invocations of the public goods concept, the mechanics of the idea are often poorly explained, and, one suspects, poorly understood. Nonexcludability and nonrivalry are each cited as reasons for the undersupply of certain goods, but the two characteristics speak to separate issues. The basic problem associated with nonexcludability is the simpler of the two. If *A* is considering planting corn but the cost of preventing *B* from making off with the crops once they sprout is more than the value of the crops themselves, *A* will generally be reluctant to plant the crops in the first place. This is the classic problem of free riding: a self-interested and rational actor is unlikely to invest in a resource when the benefits of doing so will accrue to someone else unless there is some way to recoup the opportunity costs of the investment.

One frequent source of confusion in IP debates can be avoided by distinguishing between two different senses of nonexcludability: nonexcludability in a pure self-help regime and nonexcludability despite the use of coercive government power to try and prevent access (through private property rights or direct government management, for example). This distinction is possible because a good may well be nonexcludable without government intervention but highly excludable with it—indeed, this is probably the case for most physical objects of any significant value. Recognition and enforcement of legal property rights, then, is itself a potential solution to one form of nonexcludability, nonexcludability through self-help alone. The real danger of market failure—that is, the inability to minimize economic waste through private ordering—arises when legally enforceable property rights are not feasible, a very different and more robust sort of

39 Rather than thinking of excludability as a matter of absolutes, it is probably more useful to think in terms of the cost of exclusion relative to the benefits to be gained from it. Further, as an economic justification for publicly enforced property rights, the question is whether exclusion via such rights is more efficient than exclusion by means of pure self-help. See generally Demsetz, *supra* note 25.

40 But see R.H. Coase, *The Lighthouse in Economics*, 17 J.L. & ECON. 357 (1974).

nonexcludability that, by definition, property rights cannot fix.⁴¹ We will return to this point shortly.

The supply problem that nonrivalry is meant to get at is distinct from nonexcludability and more complex, and it probably has the better claim to being the central problem in the economic analysis on public goods, at least as a matter of historical lineage. The modern literature on public goods can be traced to Paul Samuelson, who did not use the term nonrivalrous in his seminal writings, much less define it.⁴² What Samuelson did do was describe a phenomenon that complicates market mechanisms, even when a good is fully excludable. In this analysis, the hallmark of national defense, lighthouses, and fireworks shows is that they are *collective goods* in the sense that a given “unit” of, say, national defense is consumed by all citizens in equal measure.⁴³ That does not mean all citizens benefit to the same degree, only that all citizens derive some benefit from being protected against external threat, and indeed, from each incremental addition to that protection. Consumers of national defense each consume the very same thing; they do not each receive their own separate unit of national defense. This phenomenon is one economists refer to as jointness of consumption.⁴⁴

The joint consumption feature of public goods is important for two basic reasons, one theoretical and the other practical. First, joint consumption alters the way we think about the level at which a good should be provided. The production of a good is efficient when its value equals or exceeds the cost of producing it. In the case of a pure private good, the ultimate question is how many units to produce, and the answer is that the quantity of production should be increased until the next unit to be made would cost more to make than it would benefit the consumer who receives it. As a result, all that needs to be considered for any given unit of production is the value of that particular unit to the single person who will consume it.⁴⁵ For collective goods, by contrast, the cost of production must be compared against the aggregated value of the good to everyone who consumes it, since they will

41 The production and enforcement of law, including property rights, is itself a public good. But the notion of market failure typically does not refer to problems that would arise only in a state of nature; the question is whether market failure arises even after basic legal entitlements of contract, property, and the like have been specified.

42 See Samuelson, *supra* note 15.

43 See *id.* at 387.

44 See Vincent Ostrom, Comment, 18 J.L. & ECON. 691, 691 (1975) (“The critical characteristic of public or collective goods as distinguished from private or individual goods is *jointness of consumption.*”).

45 Here and elsewhere, references to “value” are shorthand for value relative to other goods (i.e., marginal rates of substitution), rather than the absolute value or benefit each derives.

all consume the same unit of output.⁴⁶ This proposition is referred to as the Samuelson condition of optimality.⁴⁷ A key implication is that the optimal production of jointly consumed goods depends on knowing not just the last consumer for whom production of a unit of the good would be efficient—the marginal consumer—but the sum of the values that all consumers would derive from their respective consumptions. The question is not how many separate units of the good to make since, by definition, a single unit will serve all consumers; it is whether to make the good or not.

Second, as the theoretical model of optimality changes, the institutional techniques by which optimality is pursued must be reconsidered. Like all collective arrangements, collectively consumed goods can present challenges. Chief among these is determining the combined value of such goods. Consider the following observations from David Hume:

Two neighbours may agree to drain a meadow, which they possess in common; because 'tis easy for them to know each others mind; and each must perceive, that the immediate consequence of his failing in his part, is the abandoning the whole project. But 'tis very difficult, and indeed impossible, that a thousand persons shou'd agree in any such action; it being difficult for them to concert so complicated a design, and still more difficult for them to execute it; while each seeks a pretext to free himself of the trouble and expense, and wou'd lay the whole burden on others.⁴⁸

Simply coordinating a complex project can certainly be difficult, but the real problem Hume identifies lies elsewhere: in the inability of different people “to know each others mind.” Among two neighbors, this might not be an insuperable obstacle, but with a large group, Hume observes, each “seeks a pretext to free himself of the trouble and expense.” To the extent they are self-interested, it is thought that the separate beneficiaries of a collective good will tend to understate the value they individually derive from it, in the hope that others will pick up the slack.⁴⁹ In modern economic parlance, the problem is one of preference revelation and incentive incompatibility.

46 Though this is sometimes depicted as a simple exercise of summing separate individual marginal rates of substitution, the aggregated-consumption function should in principle account for any interdependencies in the consumption functions of individual consumers. See FRISCHMANN, *supra* note 36, at 55.

47 See CORNES & SANDLER, *supra* note 22, at 23.

48 3 DAVID HUME, A TREATISE OF HUMAN NATURE 538 (L.A. Selby-Bigge ed., Oxford Univ. Press 2d ed. 1978) (1740).

49 That is, if their valuations are made to correlate with their contributions to its production. If, on the other hand, their contribution levels are made independent of their stated valuations, there will be an incentive to overstate the value they attach to the good.

Suppose, for instance, that a fireworks show costs \$21 to produce and is worth \$15 to Xavier, \$10 to Yvonne, and \$5 to Zadock.⁵⁰ From an efficiency standpoint, the show should be produced, since the aggregate value to its three potential viewers (\$30) exceeds the cost of producing it. Nevertheless, when asked for a contribution, Xavier may offer only \$10, Yvonne only \$5, and Zadock might beg off entirely, claiming he doesn't really like fireworks anyway, with the result that there are insufficient funds (\$15) to make the show go forward. Why would they do this? Take Xavier. He might suspect (correctly) that the fireworks show is worth enough to Yvonne and Zadock that a \$6 contribution from him will be sufficient to fund the show when added to the combined value they derive. Meanwhile, Yvonne might reason similarly that all she needs to contribute is \$1, and Zadock would conclude that any contribution from him would be totally unnecessary. This problem of coordination and gamesmanship is likely to become more serious as the number of viewers increases, as Hume suggests. Furthermore, given the shape of the demand function and the cost variable in this example, it isn't possible to implement a scheme of uniform contributions. If the total cost of production were divided evenly among each would-be viewer, at most only Xavier and Yvonne would be willing to pay, leaving the show unfunded.⁵¹

Notice that the preference-revelation problem associated with joint consumption is not necessarily solved by making a good excludable. Exclusion allows users to be charged a price for their use, but there is still no way to know the right price to charge each user since their individual valuations differ.⁵² The basic challenge of joint consumption is conceptually distinct from the challenges presented by nonexcludability, though nonexcludability may aggravate it. Notice as well that the preference-revelation problem for jointly consumed goods persists even in situations where congestion externalities are present. That one consumer's use may diminish the value of another's use of the same unit of output does not eliminate the problem of ascertaining their respective values. The feature of "sharedness" behind classic public goods analysis—from which the economic notion of nonrivalry originated—is *not* equivalent to an absence of external costs. As we will see, however, the understanding of nonrivalry generally

50 Again, these are relative rather than absolute values—marginal rates of transformation and substitution.

51 The result is sensitive to the numbers. If the cost of production were \$15, a uniform price of \$5 would work for all three. If the cost of production were \$20, a uniform price of \$10 would also work, though Zadock would be priced out.

52 See Harold Demsetz, *The Private Production of Public Goods*, 13 J.L. & ECON. 293, 295 (1970) (arguing that "[t]here is nothing in the public good concept that disallows the ability to exclude").

adopted in the IP literature is in this sense subtly but critically different. It is not concerned with joint consumption as such, it does not associate nonrivalry with a preference-revelation problem, and it treats congestion externalities as relevant to the question of rivalrousness.

At the heart of the public goods literature is a paradigm in which, so to speak, all beneficiaries of a good collectively comprise a single consumer. If an aspirin is beneficial to both a person's elbow and knee, the person will consider the total combined benefit to decide whether the cost of the medicine is worth it. This is easy enough to do: the knee isn't going to underreport its need for aspirin in the hope that the elbow will pick up the slack. Likewise, when the same good—knowledge of a process for reducing joint aches, let's say—would benefit two separate people, its value is equal to the sum of its total value to each beneficiary, making it necessary to find some way to figure out what those separate benefits are—that's the Samuelson condition. But unlike separate parts of the same human body, different people have minds of their own, requiring some means to discover the full measure of their respective individual valuations. This is the basic problem public goods theory identifies in the production of jointly-consumed goods.

C. Nonrivalry and IP

The proposition that ideas and information are nonrivalrous is foundational to mainstream thinking about intellectual property.⁵³ In part, this characterization is used to import stylized forms of economic modeling to intellectual property. But there is a more general kind of claim that is made about IP law that requires no specialized analysis to understand, and this will be the primary focus of the discussion that follows. This Section begins with a brief examination of certain ways nonrivalry is sometimes invoked in justifications of IP, before turning to arguments that rely upon nonrivalry as a reason to limit or oppose intellectual property rights.

I. Underproduction: Copying and Free Riding

While it is frequently asserted that ideas and information are public goods and therefore subject to possible underproduction, the problem is generally described as a matter of free riding, rather than in terms of the preference-revelation dynamic associated with joint consumption. The basic claim is that information goods can be copied, that this is so because of their nonrival character, and that if competing suppliers or consumers can simply copy the fruits of someone else's

53 See, e.g., sources cited *supra* note 16.

investments in developing such goods, producers may lack sufficient incentive to produce the goods in the first place.⁵⁴

While this free-riding narrative is quite plausible in some, and perhaps many cases, it is really a story about nonexcludability, not nonrivalry.⁵⁵ Thus, for example, while it might be difficult to prevent ships from availing themselves of an ordinary lighthouse, the free-riding problem would largely go away for a lighthouse that was engineered so that its beam could only be seen by those who purchase special glasses from the lighthouse.⁵⁶ Conversely, if free riding cannot be prevented, then the potential for undersupply emerges, regardless of whether the beam can be used at any given time by one person or by a multitude.⁵⁷ After all, the common metaphor of “reaping where one has not sown” used to describe free riding speaks of crops that are highly rivalrous in consumption.⁵⁸

To be sure, the fact that multiple users can use the same resource without interfering with each other might make free riding more likely in some instances by making it harder to restrict access by others—which is to say, by making a good more nonexcludable.⁵⁹ To the extent one person’s consumption does not limit another’s, a purchaser can share a resource without giving anything up, for instance, and might therefore be more willing to do so. In addition, it may be harder to monitor how much the resource has been used if individual use doesn’t deplete its capacity or alter readily observable qualities. Nevertheless, the relationship is contingent and the consequences of nonexcludability do not bear any necessary connection to nonrivalry. A good that is capable of being shared among multiple users may still be highly excludable, and a good may be nonexcludable without being shareable. So far as free riding is concerned, the essential problem is nonexcludability, full stop. And as already noted, nonexcludability in the weak sense of an inability to prevent access through pure self-help is the *raison d’être* of legally enforceable property rights generally.⁶⁰

54 See, e.g., Sonia K. Katyal, *Trademark Intersectionality*, 57 UCLA L. REV. 1601, 1613 (2010) (“Because information by nature tends to be nonrivalrous and nonexclusive, it is difficult to exclude third parties from free riding from its creation.”).

55 See FRISCHMANN, *supra* note 36, at 29 (making a similar point).

56 See Demsetz, *supra* note 52, at 295.

57 It is of course possible that goods will still be supplied for other reasons, such as altruism or optimism bias.

58 See *Int’l News Serv. v. Associated Press*, 248 U.S. 215, 239–40 (1918).

59 See Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 947–48 (2005).

60 See Demsetz, *supra* note 25. To be clear, the point here is comparative. Property law might be justified even if *de facto* exclusion were relatively cheap so long as the public supply of property rights were cheaper still. See also Douglas Lichtman, *How the Law Responds to Self-Help*, 1 J.L. ECON. & POL’Y 215, 215–16, 231 (2005).

To the extent the concern is with free riding, it is simply false that intellectual property rights are the solution to a public goods problem, at least in any sense that would distinguish them from conventional private property rights. A true nonexcludability problem leading to a failure of private ordering would arise only in situations where private rights—conventional property or IP—would not work.

2. Diminished Access: Deadweight Loss

Public goods economics arose as a theory of why markets might fail to produce certain types of goods at optimal levels, and to that extent, the free-riding story is at least in keeping with its original focus. There is, however, a second way in which nonrivalry is invoked in discussions of intellectual property. If excludability can be achieved, either by self-help (digital rights management, secrecy, reputational sanctions, and so on), or through governmentally enforced IP rights, it is said that nonrivalry generates a new problem, and it is here that the real critique begins. In the standard account, exclusion itself is a problem for certain goods.

The argument is simple and intuitive. Property is a matter of exclusive rights, which “implies its application only to limited resources, that is, those that are exhaustible.”⁶¹ Information goods aren’t depleted by use, however, and as a result, “there is little potential for conflict among users, and property rights are not necessary to avoid such conflicts.”⁶² The resources at the center of IP law cannot be overused, damaged, or allowed to fall into disrepair the way that a tangible object might be.⁶³ Thus, it is said, “intellectual property rights create scarcity whereas property rights in physical goods manage scarcity.”⁶⁴ Exclusive rights to goods that do not require exclusive use results in needless exclusion. Simply put, “ideas are not much like apples.”⁶⁵

This does not necessarily mean intellectual property is unjustifiable. The standard account holds that IP law confers temporary legal monopolies to encourage the production of goods that would not otherwise be produced. An intellectual property right is thus a type of subsidy, appearing in the form of a private right and reminiscent in structure to traditional property entitlements in certain respects.⁶⁶ But

61 O. Lee Reed, *What Is “Property”?*, 41 AM. BUS. L.J. 459, 496 (2004).

62 Stewart E. Sterk, *Intellectualizing Property: The Tenuous Connections Between Land and Copyright*, 83 WASH. U. L.Q. 417, 433 (2005).

63 See Lemley, *supra* note 30, at 1055.

64 LANDES & POSNER, *supra* note 16, at 20 (attributing the position to Arnold Plant); see also Balganesch, *supra* note 18, at 1137–38.

65 Mark A. Lemley, *Faith-Based Intellectual Property*, 62 UCLAL. REV. 1328, 1339 (2015).

66 Macaulay famously referred to copyright as a “a tax on readers for the purpose of giving a bounty to writers,” adding, however, that because of “the necessity of giving a

though IP rights might have a property-like form, their substance is fundamentally different. At their core, IP rights differ dramatically from ownership, which is a matter of control over resources that must be allocated *somehow*.⁶⁷ Unlike property in land and tangible objects, IP has no grounding in conflicts over use and does not respond to the need to decide between competing claims to resources that by their very nature cannot satisfy everyone.⁶⁸ Intellectual property lacks the central conceptual anchor that supports ordinary property law and as a result, necessarily stands in a defensive posture. It is a form of regulation and a deviation from the principle of free competition⁶⁹—necessary for larger social ends, perhaps, but artificial and tenuous to an extent that traditional property is not.⁷⁰ Thus concludes one of America's foremost IP scholars:

If anything, the public nature of a good seems to suggest that proprietization is a uniquely bad idea, precisely because the consumption of that good is “nonrivalrous”—it does not take away from the creator of that good. Rather, intellectual property is in some sense a necessary evil—a restriction on the free flow of information to the minimum extent necessary to encourage needed investment in innovation.⁷¹

This analysis bears not only on the “utilitarian” or instrumentalist view of intellectual property but other understandings as well. Seana Shiffrin, for example, argues that John Locke's seminal account of the moral origins of private property depends on the fact that private appropriation is necessary to make effective use of goods originally held in common. But because ordinarily “one's use or consumption of an idea, proposition, concept, expression, method, and so forth, is fully compatible with others' use, even their simultaneous use,” the basic Lockean justification for private appropriation “falls flat.”⁷²

bounty to genius and learning,” he would “willingly submit even to this severe and burdensome tax.” Thomas Macaulay, *A Speech Delivered in the House of Commons* (Feb. 5, 1841), in *SPEECHES ON POLITICS AND LITERATURE* 176, 182 (1909).

67 Including, potentially, as an open-access commons subject to a first-come, first-served rule.

68 See Hettinger, *supra* note 19, at 20; see also Smith, *supra* note 18.

69 See Lemley, *supra* note 65, at 1330–31.

70 See, e.g., John M. Kraft & Robert Hovden, *Natural Rights, Scarcity & Intellectual Property*, 7 *N.Y.U. J.L. & LIBERTY* 467, 475 (2013) (“The very basis and conception of the convention of property rights arises when it is impossible for two or more individuals to simultaneously derive the benefit of an object in nature.”).

71 Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 *TEX. L. REV.* 873, 902 (1997) (book review) (footnote omitted).

72 Seana Valentine Shiffrin, *Lockean Arguments for Private Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 138, 156, 156–57 (Stephen R. Munzer ed., 2001). Shiffrin does note, however, that effective use may be facilitated by exclusive rights in some cases, such as those involving premature publication or secrecy. *Id.*

Appropriative labor might explain why a particular claimant is entitled to own a resource when a system of private property itself is justified, but it is rivalrousness, not labor, that explains why such a system could be justified in the first place, and it is generally absent when it comes to information goods. Without a need for exclusive use, there is simply no need for exclusive rights.

This is the basic argument confronted in this Article. It is intuitive and powerful. As mentioned earlier, however, this claim is often articulated in more self-consciously economic terms by modeling nonrivalry as a condition in which marginal cost of supplying all but the first unit of output is zero or at least low relative to fixed costs.⁷³ The argument starts with the premise that if the marginal cost of supplying a good is less than the marginal value a consumer would derive from obtaining it, the good should be supplied, and happily, in a competitive market, producers generally will be unable to charge above marginal cost (and will be unwilling to charge below it). But intellectual property rights open the door to pricing above marginal cost—that is to say, they enable rights holders to charge a positive price.⁷⁴ To the extent some people attach value to the use of an information good that is less than the price being charged for access to it, IP rights lead to inefficient resource allocation or deadweight loss because those users will forgo the information good and the benefits they would derive from it, even though those benefits outweigh the costs of providing access.⁷⁵

This sort of argument is sometimes criticized for assuming the existence of the good in the first place, and while the language of deadweight loss can give a misleading impression, it should not be interpreted to suggest that what is meant is necessarily an overall social loss. Economists distinguish between static efficiency, the efficient allocation of resources as of any particular moment, and dynamic efficiency, the efficient deployment of resources across time. The broad claim that supra-marginal cost pricing results in deadweight loss refers only to static, not dynamic, efficiency. The point is nevertheless a powerful one. Traditional property law is thought, at least potentially, to

at 157. This is by no means the only possible interpretation of Locke on this point. See Adam D. Moore, *A Lockean Theory of Intellectual Property Revisited*, 49 SAN DIEGO L. REV. 1069, 1092 (2012) (arguing that while information goods are generally nonrivalrous, there is no prima facie moral entitlement to use them in ways that are immoral).

⁷³ See John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439, 476 (2004) (stating that the “term ‘nonrival’ is . . . merely another way of stating that there is usually no marginal social cost associated with using intellectual property multiple times”).

⁷⁴ See Yochai Benkler, *Siren Songs and Amish Children: Autonomy, Information, and Law*, 76 N.Y.U. L. REV. 23, 87 n.164 (2001).

⁷⁵ See Sterk, *supra* note 62, at 467.

promote *both* static and dynamic efficiency,⁷⁶ but IP rights are necessarily inefficient from a static perspective. On this incentives-only understanding, the benefits of IP rights as a matter of dynamic efficiency may offset this static deadweight loss, but whether they in fact do so is the central question to be asked.⁷⁷

The upshot of the standard claims about deadweight loss and marginal cost is essentially to repeat the conclusion that IP rights can be justified, if at all, only on incentive grounds.⁷⁸ Denying someone something they want necessarily constitutes a social cost; if the only possible basis for denying someone something is to encourage others to produce similar things in the future, society is necessarily worse off if the denial of access is not actually needed to encourage production or if it is ineffective in doing so.⁷⁹ The proposition that, in and of itself, restricting access to ideas and information is necessarily all cost and no benefit—and that this can be known without empirical investigation or examination of context—is the argument from nonrivalry.

II. INFORMATION'S RIVAL PROPERTIES

A. *Understanding Rivalry*

The answer to any question about the meaning of a word or concept depends on the reason for asking the question. The “length” of the Boston Marathon means one thing to runners who compete and another to police officers receiving overtime pay for patrolling the race. Whether ideas and information are nonrivalrous is a function of the purpose of the characterization. The “peculiar character” of an idea identified by Thomas Jefferson is not as simple as it might first appear and seemingly subtle differences in the way the problems presented by information goods are understood can produce very different results.

76 In terms of static efficiency, property rights can produce a more efficient allocation of resources insofar as they either assign resources to those who value them most highly or otherwise improve conditions for voluntary exchange that will bring about such an assignment, as by lowering transaction costs. On the dynamic front, they can avert problems of overuse and underinvestment associated with free riding and the “tragedy of the commons.” (Common property may be inefficient in static terms as well, if a single user derives more value from the use of an asset than a collectivity.)

77 See Bracha, *supra* note 18, at 637.

78 This statement is principally aimed at copyright and patent law. Other IP regimes, such as trademark law, generally rest on somewhat different functional bases that have less to do with encouraging the production of information goods. And it bears repeating that other justifications for IP rights exist besides “utilitarian” or economic ones.

79 See Lemley, *supra* note 30, at 1046, 1065–69; Karjala, *supra* note 16, at 1066.

The original notion of goods characterized by joint or collective consumption, for instance, reflects concerns that a particular type of coordination problem might lead markets to underproduction of such goods. And as noted above, the problem is not necessarily diminished by the existence of consumption externalities or other negative effects on others, so long as the same quantity of production enters the consumption function of multiple consumers. The way in which rivalrousness is generally used in discussions of IP, however, seeks to capture something different. As we have seen, the question it addresses is whether intellectual property rights are appropriate—whether there are any possible justifications for intellectual property rights other than as a subsidy to encourage individuals and firms to produce information goods. If ideas and information are nonrivalrous, the argument goes, the answer is no. Rivalry is shorthand for a phenomenon that underlies justifications for property rights in scarce goods like physical space and tangible objects.

When the idea of rivalrousness is deployed in this way, its meaning should incorporate the concerns that underlie the law of property. For this reason, the definition of rivalrousness we seek, though similar in some respects to the idea of joint consumption central to Samuelsonian public goods economics, ultimately refers to something quite different.⁸⁰ So long as the argument about IP is one that draws on the ideas central to property theory, we need a definition of rivalrousness that reflects a property theory perspective—a perspective centered on the idea of resource conflicts. Along similar lines, to the extent nonrivalry refers to an absence of negative effects on others for purposes of analyzing static efficiency, we need to consider the full range of potential negative effects that would be relevant to such an analysis.

1. Nondichotomous, Subjective, Relational, Contingent

Recall the earlier example of Arnold, Betty, and the apple, which might be thought of as the paradigm case of rivalrousness. The scenario it depicts is highly stylized, involving only two people and a single resource that appears to be amenable to a single use, and in this way, it may obscure certain complexities about the concept of rivalrousness. We may begin by observing that rivalrousness is not an absolute determination. Commentators often speak of particular goods as “rival” or “nonrival” as shorthand (or somewhat more precisely, of the rivalrousness of their consumption), but in reality, goods vary in the degree of their rivalrousness. At one level, this is well recognized. Economists

80 Cf. Barnes, *supra* note 20, at 105 (“Some scholars have rephrased the definition of non-rivalrousness in a way somewhat divorced from the technical public finance definition. These alternatives are more amenable to application to intellectual property law.”).

generally acknowledge that pure public goods are exceptional and that most goods lie somewhere between that ideal type and a perfectly private good.⁸¹ In particular, a robust literature on what are called impure public goods has developed, involving resources like highways that are subject to some degree of congestion.⁸² These resources are thought to be nonrivalrous to a degree, beyond which additional usage will diminish others' ability to enjoy the resource.⁸³

To see congestion as introducing some measure of rivalrousness may not be entirely correct from the standpoint of Samuelsonian public goods analysis, but it is consistent with the idea of rivalrousness suggested by basic property theory.⁸⁴ Congestion suggests limitation, and limitation suggests conflict. Who, after all, likes to sit in traffic? But the phenomenon of congestion is only the beginning when rivalrousness is considered from the vantage point of property. It is not simply that there are limits on the extent to which some resources can be shared without affecting others' consumption opportunities. Rivalrousness is far more variable even than that, but to see why, we have to dissect the idea more carefully. Using the idea of resource conflict as our key, several points become clear.

First, rivalrousness is not a purely technological attribute but is instead at least partly subjective or psychic.⁸⁵ In other words, it is not simply a fixed characteristic of a good that can be evaluated in the abstract, irrespective of the preferences or wishes of individual people. Commentators have at times suggested that rivalrousness is an

81 See, e.g., JAMES M. BUCHANAN, *THE DEMAND AND SUPPLY OF PUBLIC GOODS* (1968), reprinted in 5 *THE COLLECTED WORKS OF JAMES M. BUCHANAN* 48 (1999) ("Strictly speaking, no good or service fits the extreme or polar definition in any genuinely descriptive sense."); Stephen Enke, *More on the Misuse of Mathematics in Economics: A Rejoinder*, 37 *REV. ECON. & STAT.* 131, 132 (1955); see also Lee Anne Fennell, *Beyond Exit and Voice: User Participation in the Production of Local Public Goods*, 80 *TEX. L. REV.* 1, 6–8 (2001).

82 See CORNES & SANDLER, *supra* note 22, at 272–77.

83 There is some debate over whether to consider precongestion consumption as non-rivalrous. See Brett M. Frischmann, *Environmental Infrastructure*, 35 *ECOLOGY L.Q.* 151, 155 & n.10 (2008).

84 See, e.g., Frischmann, *supra* note 59, at 951–52. Similarly, it is suggested that the existence of network effects (i.e., positive externalities in which one person's consumption of a good enhances another's enjoyment of it) makes a good "antirivalrous." See Lawrence Lessig, *Do You Floss?*, *LONDON REV. BOOKS*, Aug. 18, 2005, at 24; see also STEVEN WEBER, *THE SUCCESS OF OPEN SOURCE* 28–29 (2004); Brian J. Focarino, *The Trademark as a Novel Innovation Index*, 9 *J. BUS. ENTREPRENEURSHIP & L.* 73, 88 (2015); Thomas B. Nachbar, *The Comedy of the Market*, 30 *COLUM. J.L. & ARTS* 453, 457 (2007).

85 This statement assumes a perspective centered on conflicting preferences. On an approach centered on conflicting moral interests that may or may not be subjectively appreciated, rivalry is not subjective in the sense of referring to anyone's state of mind. Nevertheless, it is still more than a purely technological feature of a good since the relationship between a person's moral interests and their use of a good will be a function of considerations besides what it is technically possible to accomplish by any particular resource state.

objective “fact of nature,” so it is critical to see that this is not the case.⁸⁶ Rather, rivalrousness is a product of the interplay between the objective, technological attributes of good and subjective human desires regarding those attributes.⁸⁷ It depends both on the ways a good can be used and on the attitudes that individuals take toward those uses. So, for example, a car with four seats might be nonrival to the extent three friends want to use it to get from the same starting point to the same destination, but not if they want to go to different places in opposite directions. Assuming compatibility of destinations, it is nonrival to the extent they enjoy each other’s company and were hoping to spend time together; it is rival to the extent they want to make private phone calls or simply have some time alone.

Second, rivalrousness is relational. It describes not just human preferences but their interaction. At its core, it is a way of describing the compatibility—or lack of it—of their individual desires regarding the disposition of an individual resource. It is relational, moreover, not simply in the sense that it concerns this interaction but because it is often likely to differ between different pairs of people. If two of the passengers in the car in the example above want silence and one wants to listen to Metallica, the car is rival as between the Metallica fan and the silence lovers, but not as between the silence lovers. The degree of rivalrousness associated with a good is a function of the number of people interested in how it is used, and can generally be expected to increase as more people are implicated.

Finally, rivalrousness is variable not simply in the sense of being a matter of degree but also of being contingent. It is not written in the stars, and it can and does change. Consider a historical example. In eighteenth- and nineteenth-century New England, rivers were useful in large measure as a source of power.⁸⁸ A river flow, for instance, could be used to turn a paddle at a gristmill and supply the force needed to grind flour. Water law doctrine generally granted anyone

86 See Yochai Benkler, *An Unhurried View of Private Ordering in Information Transactions*, 53 VAND. L. REV. 2063, 2066 (2000) (“The degree to which a good is or is not rivalrous is a fact of nature—a thing either does, or does not have this unusual attribute that, once produced, many can enjoy it without added cost.”); see also Reed, *supra* note 61, at 465.

87 The same holds true if we consider the problem not from the standpoint of what people want but from the standpoint of their interests, in the sense of objective moral welfare, though the former is the more common perspective in contemporary economic analysis of the law. See Robert D. Cooter, *The Best Right Laws: Value Foundations of the Economic Analysis of Law*, 64 NOTRE DAME L. REV. 817, 818 (1989).

88 See Carol M. Rose, *A Tale of Two Rivers*, 91 MICH. L. REV. 1623, 1623–24 (1993) (reviewing, *inter alia*, THEODORE STEINBERG, *NATURE INCORPORATED: INDUSTRIALIZATION AND THE WATERS OF NEW ENGLAND* (1991)); see also Carol M. Rose, *Energy and Efficiency in the Realignment of Common-Law Water Rights*, 19 J. LEGAL STUD. 261, 290–92 (1990) [hereinafter Rose, *Energy*].

fronting a river the right to use such water as the user reasonably needed.⁸⁹ We would say these riparian rights reflect a view of the water as largely nonrivalrous.⁹⁰ One mill operator is unlikely to care whether another one upstream or downstream makes use of the same river.⁹¹ When larger-scale irrigation began to take place in westward expansion into more arid terrain, however, the equation changed and downstream river users sought to establish rights against upstream users who diverted water for crops.⁹² In contrast to water used for power, these agricultural uses implied a more rivalrous view of water. The physical characteristics of water and of the surrounding environment were certainly important to the story, but the change itself was ultimately a function of differences in what human beings wanted to happen with the water sources they encountered.

2. Negative Preferences

Understanding rivalry in terms of incompatible wishes with respect to the disposition of a resource opens the door to one other, critical issue concerning the scope of the idea of rivalry. Rivalry is often described as a matter of one person's use of a particular resource precluding another's, where "use" is understood as affirmative and active. In the case of Arnold and Betty, both people want *to eat* the apple. They both want to do something with it—in fact, conveniently, they want to do the very same thing with it.

This is a persistent and fundamental template for conflict but it is only one subset of the larger universe of problems relevant to the question of rivalry. Consider land conservation. Walt would like to develop a parcel of land as a theme park; Teddy would like it to remain in its undeveloped state. Teddy does not really want to use the land as the verb "use" is understood in ordinary language—just to be clear, he does not want to open the land up to hikers or to view it himself or anything like that. He just does not want it turned into a theme park. In this situation, property law is faced with a potential conflict over the use of the land, a conflict not between Teddy's use and Walt's use, but between Walt's desire to use the land and Teddy's desire that Walt not use it.

89 See Rose, *Energy*, *supra* note 88, at 282–88.

90 Modern water law similarly draws distinctions between "consumptive" and "non-consumptive" uses. See ANTHONY DAN TARLOCK & JASON ANTHONY ROBISON, *LAW OF WATER RIGHTS AND RESOURCES* § 3:72 (2023 ed.).

91 Assuming, at least, they are not market competitors.

92 See Carol M. Rose, *Property in All the Wrong Places?*, 114 *YALE L.J.* 991, 1008 (2005) (reviewing, *inter alia*, KAREN R. MERRILL, *PUBLIC LANDS AND POLITICAL MEANING: RANCHERS, THE GOVERNMENT, AND THE PROPERTY BETWEEN THEM* (2002)).

Rivalrousness in the sense relevant to property law is not limited to situations where two affirmative courses of conduct interfere with one another. It is sufficient that two people disagree about whether one of them should use a resource in a particular way. And once it is understood that the rivalry problem is present whenever one person desires to use a resource and someone else desires, for whatever reason, that that person not do so, the potential for rivalrousness expands dramatically. Again, consider lighthouses. A lighthouse might be nonrivalrous *as between ship captains*, and in the abstract, it might be useful to be able to speak of a lighthouse as a nonrivalrous good for certain purposes. But the determination whether, or to what extent, an actual real-life lighthouse is nonrivalrous in the sense relevant to property is not possible without more information about, for instance, those who live next door to the lighthouse and who might object to the incessant glare of its light all night, every night.⁹³ (The point would be even more obvious if we were talking about a foghorn.)⁹⁴

In fact, not infrequently some of the classic examples of public goods are in practice distinct *bads* for at least some people, particularly neighbors, and depending on the magnitude of the harm, potentially for society as a whole. Streetlights, highways, airports, railroads, garbage dumps, sports stadiums, and prisons may well entail joint consumption for their beneficiaries but impose substantial costs on those nearby. (This is precisely why public goods are plagued by the much-discussed phenomenon of NIMBYism, as in, “Not In My Back Yard.”)⁹⁵ For some purposes, it may be useful to ignore such conflicts, so long as it is remembered that the scope of analysis has been subjected to artificial limitation. But where rivalrousness is equated with resource conflict and the essential task of allocating authority over resources that property law performs, the existence of these negative preferences must also be considered.

B. *Are Ideas and Information Nonrival?*

What then can we make of the claim that information goods are nonrivalrous? For these purposes, we can begin by focusing on the

93 See, e.g., Erik Larsen, ‘Old Barney’ to Light the Sky Once Again, ASBURY PARK PRESS (Asbury Park, N.J.), Sept. 18, 2008, at A1 (quoting reassurances from Angelo Rinaldi, president of the Friends of Barnegat Lighthouse State Park, that the “light that goes out is a pencil beam, whereas back in 1859, that thing could flood the whole neighborhood with light. This will not do that. We probably would’ve had a lot of complaints”).

94 See, e.g., Rebecca Black, *Residents Sound Off over Return of Foghorns*, BELFAST TEL. (Oct. 3, 2015, 6:00 AM), <https://www.belfasttelegraph.co.uk/news/northern-ireland/residents-sound-off-over-return-of-foghorns/31577826.html> [<https://perma.cc/8GZZ-ZBJB>].

95 See Abraham Bell & Gideon Parchomovsky, *Of Property and Antiproperty*, 102 MICH. L. REV. 1, 61 (2003).

general assertion that IP rights lack the conceptual underpinnings and basic justification applicable to ordinary property. At its core, this critique asserts that because the consumption of an IP good works no injury to anyone else, rights to prevent others from consuming an IP good necessarily produce harm to some (those prevented from consuming it) without any corresponding benefit to others (those entitled to prevent that consumption).⁹⁶

Once rivalry is understood to encompass conflicting preferences of all kinds pertaining to the disposition of an individual resource—and in particular to encompass those in which one person wants to use a resource and another wants that person not to do so—the asserted difference between tangible and intellectual goods breaks down. Consider some real-world examples. Warner Brothers refuses to license Dukes of Hazzard toys because of the Confederate flag painted on the roof of the car driven by protagonists Bo and Luke Duke.⁹⁷ Disney has kept its film *Song of the South*—criticized as racially insensitive even at the time of its 1946 release—buried in its vaults.⁹⁸ The comedian Jerry Lewis sought to obliterate *The Day the Clown Cried*, a film in which he played a circus clown at a Nazi concentration camp.⁹⁹ Samuel Beckett sued to prevent staging *Waiting for Godot* with a female cast¹⁰⁰ and J.D. Salinger sought to enjoin publication of his correspondence.¹⁰¹ Ashley Madison, the adultery-facilitation service, sent copyright takedown

96 See Frischmann, *supra* note 59, at 945–46 (“Most economists accept that it is efficient to maximize access to, and consequently consumption of, an existing nonrival good because generally there is only an upside; additional private benefits come at no additional cost. Ideas, like other nonrival goods, have infinite capacity.” *Id.* at 946 (emphasis omitted)).

97 See Josef Adalian, *The Controversy over the Confederate Flag Has Reached Hazzard County*, VULTURE (June 23, 2015), <https://www.vulture.com/2015/06/dukes-hazzard-confederate-flag-warner-bros-stop-licensing.html> [<https://perma.cc/36HX-DDHW>].

98 See John Ligan, *Bristling Dixie*, SLATE (Jan. 4, 2013, 11:36 PM), <https://slate.com/culture/2013/01/song-of-the-south-disneys-most-notorious-film-by-jason-sperb-reviewed.html> [<https://perma.cc/JR74-6AXP>].

99 See Mark Olsen, *Deep Questions for Jerry Lewis*, L.A. TIMES, Sept. 7, 2016, at E1 (“‘Never,’ he said as to whether the film would finally be shown publicly. ‘After I’m dead 30 years, you won’t see it. I’ve got it worked out so there’s nothing to show.’”). A milder version of this phenomenon involves the refusal of a director to appear in a film’s credits, in which case the custom is to list “Alan Smithee” as the director. See Peter Decherney, *Auteurism on Trial: Moral Rights and Films on Television*, 2011 WIS. L. REV. 273, 300.

100 See Deborah Caulfield & Steve Weinstein, *Morning Report: Stage*, L.A. TIMES, May 2, 1988, at G2; see also Barbara McMahon, *Beckett Estate Fails to Stop Women Waiting for Godot*, GUARDIAN (Feb. 4, 2006, 6:53 PM), <https://www.theguardian.com/world/2006/feb/04/arts.italy> [<https://perma.cc/KW22-UCTH>].

101 See *Salinger v. Random House, Inc.*, 811 F.2d 90 (2d Cir. 1987).

notices to websites posting hacked customer data,¹⁰² while Amazon.com impresario Jeff Bezos threatened the *National Enquirer* with copyright liability if it released what might politely be called his overly revealing self-portraiture.¹⁰³ YouTube has had to respond to advertisers' concerns about advertisements appearing next to objectionable material.¹⁰⁴ Numerous inventors have expressed regret for their inventions, including the originators of the pop-up ad, the Keurig K-Cup, the Comic Sans typeface, and the AK-47, to name a few.¹⁰⁵ A group of more than 1,000 technology experts, including prominent scientists and business leaders in technology fields, have jointly called for a "pause" on artificial intelligence research, citing "potentially catastrophic effects on society."¹⁰⁶

Even more common are conflicts where one person would like to restrict certain uses of an information good, rather than prohibit its use altogether. European pharmaceutical companies, for instance, have sought to prevent the use of drugs they manufacture in capital punishment.¹⁰⁷ Bill Watterson, the creator of the comic strip *Calvin and Hobbes*, categorically opposes the idea of a film adaptation or merchandising of his characters.¹⁰⁸ The Beastie Boys have prohibited any

102 See Hope King, *Ashley Madison Tries to Stop the Spread of Its Leaked Data*, CNN BUS. (Aug. 21, 2015, 5:14 PM), <https://money.cnn.com/2015/08/21/technology/ashley-madison-dmca-requests/> [<https://perma.cc/D8SKJXB4>].

103 See Jeff Bezos, *No Thank You, Mr. Pecker*, MEDIUM (Feb. 7, 2019), <https://medium.com/@jeffreypbezos/no-thank-you-mr-pecker-146e3922310f> [<https://perma.cc/R6MV-Q6NB>].

104 See Jack Nicas, *Google's YouTube Has Continued Showing Brands' Ads with Racist and Other Objectionable Videos*, WALL ST. J. (Mar. 24, 2017, 5:17 PM), <https://www.wsj.com/articles/googles-youtube-has-continued-showing-brands-ads-with-racist-and-other-objectionable-videos-1490380551> [<https://perma.cc/XRA7-SXLF>].

105 See Colleen Kane, *10 Inventors Who Apologized for Their Inventions*, FORTUNE (Mar. 17, 2015, 5:47 AM), <https://www.fortune.com/2015/03/17/10-inventors-who-apologized-for-their-inventions/> [<https://perma.cc/4G4P-2WYR>].

106 See *Pause Giant AI Experiments: An Open Letter*, FUTURE OF LIFE INST. (Mar. 22, 2023), <https://futureoflife.org/open-letter/pause-giant-ai-experiments/> [<https://perma.cc/G955-GHCF>]; Cade Metz & Gregory Schmidt, *Elon Musk and Others Call for Pause on A.I., Citing 'Profound Risks to Society'*, N.Y. TIMES (Mar. 29, 2023), <https://www.nytimes.com/2023/03/29/technology/ai-artificial-intelligence-musk-risks.html> [<https://perma.cc/Q42X-DYJM>].

107 See David Jolly, *Danish Company Blocks Sale of Drug for U.S. Executions*, N.Y. TIMES (July 1, 2011), <https://www.nytimes.com/2011/07/02/world/europe/02execute.html> [<https://perma.cc/8487-GBE5>].

108 See Richard Samuel West, Interview, *Bill Watterson*, COMICS J., Feb. 1989, at 56, 67–69 ("I have no aversion to obscene wealth, but that's not my motivation either. I think to license *Calvin and Hobbes* would ruin the most precious qualities of my strip and, once that happens, you can't buy those qualities back." *Id.* at 68.); Liam McGuire, *Why Calvin and Hobbes' Creator Turned Down Steven Spielberg's Film Offer*, SCREEN RANT (Dec. 20, 2022), <https://screenrant.com/calvin-and-hobbes-bill-watterson-reject-steven-spielberg-film/> [<https://perma.cc/27DS-DETS>].

use of their music in commercial advertising.¹⁰⁹ And the situation Donald Trump faced in assembling a campaign playlist is nothing new: over the years, numerous musical acts have tried to prevent songs they have written or recorded from being used by political candidates they oppose.¹¹⁰ In addition to interests pertaining directly to the use of an information good, a person might be interested in preventing its use as leverage to accomplish some other aim.¹¹¹ The movie star Jamie Lee Curtis, for instance, obtained a patent in 1988 for a baby diaper design she devised,¹¹² but she reportedly refused to license her patent until biodegradable diapers were made available.¹¹³

Preferences to deny access are by no means limited to the creators of information goods or to those who are awarded recognized IP rights. Star Wars fans opposed to George Lucas's revisions to the

109 See Jon Blistein, *Beastie Boys Settle Lawsuit over 'Girls' Toy Commercial*, ROLLING STONE (Mar. 18, 2014), <https://www.rollingstone.com/music/music-news/beastie-boys-settle-lawsuit-over-girls-toy-commercial-184719/> [<https://perma.cc/32NT-XNVS>]. Indeed, deceased Beastie Boy Adam Yauch included language in his will prohibiting the use of his "artistic property" for advertising purposes. See RJ Cubarrubia, *Adam Yauch's Will Prohibits Use of His Music in Ads*, ROLLING STONE (Aug. 9, 2012), <https://www.rollingstone.com/music/music-news/adam-yauchs-will-prohibits-use-of-his-music-in-ads-243913/> [<https://perma.cc/A383-Z3EV>].

110 See Trent Hooper & Marley Clark, *Campaign Branding: The IP Hoops and Hurdles of Marketing a Candidate*, MONT. LAW., Sept. 2012, at 12, 14; see also Michelle Lin, *Keep on Rockin' in the Free World: Trademark Remedies for Musicians*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 98, 98–99 (2011); Kimberlianne Podlas, *I Do Not Endorse This Message! Does a Political Campaign's Unauthorized Use of a Song Infringe on the Rights of the Musical Performer?*, 24 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1, 4–7 (2013); Lauren M. Bilasz, Note, *Copyrights, Campaigns, and the Collective Administration of Performance Rights: A Call to End Blanket Licensing of Political Events*, 32 CARDOZO L. REV. 305, 306–08 (2010); Matthew J. Cursio, Comment, *Born to Be Used in the USA: An Alternative Avenue for Evaluating Politicians' Unauthorized Use of Original Musical Performances on the Campaign Trail*, 18 VILL. SPORTS & ENT. L.J. 317, 318–19 (2011).

111 For the sake of argument, the discussion here sets aside any consideration of what might be called purely pecuniary preferences—Arnold's desire that Betty not use Blackacre, or Blackidea, without paying a fee to Arnold for doing so, not for any reason intrinsic to Betty's use but simply because Arnold would prefer to receive money than not to. From the standpoint of neoclassical economics, it might be defensible to exclude such preferences for essentially the same reasons so-called pecuniary externalities are thought to be unproblematic, though the argument is more complicated than it might at first seem. See DAVID K. WHITCOMB, EXTERNALITIES AND WELFARE 6–7 (1972); cf. Einer Elhauge, *Contrived Threats Versus Uncontrived Warnings: A General Solution to the Puzzles of Contractual Duress, Unconstitutional Conditions, and Blackmail*, 83 U. CHI. L. REV. 503, 522–25 (2016) (discussing welfare losses associated with "contrived threats"). For present purposes, let it suffice to say that pecuniary preferences can be set aside because they are not necessary to make the point about rivalrousness.

112 See U.S. Patent No. 4,753,647 (filed Feb. 20, 1987).

113 See THE IDEAS COMPANION: CLEVER COPYRIGHTS, TREMENDOUS TRADEMARKS & PEERLESS PATENTS 14 (Johnny Acton ed., 2005).

original films, for example, might like to prevent what to them is the desecration of art by its creator.¹¹⁴ Use of antibiotic treatment leads to the emergence of antibiotic-resistant microbial strains, which is considered an increasingly serious problem by public health officials;¹¹⁵ someone whose life depends on effective antibiotic treatment has a clear interest in denying such treatment to those without serious need.¹¹⁶ Almost certainly there are many people who would be pleased to hear that the book *Hit Man: A Technical Manual for Independent Contractors* had fallen out of circulation.¹¹⁷ And it seems a safe bet that there are substantial numbers of people who would prefer the human race had never come up with such novelties as land mines, cigarettes, cargo shorts, Jet Skis, genetically modified foods, anabolic steroids, robo-callers, date-rape drugs, subwoofers, Ponzi schemes, and crystal meth, to name just a few.¹¹⁸ Nor are such desires necessarily limited to those arising predominantly from moral, ideological, or aesthetic commitments.¹¹⁹ One person might wish, for example, to be the only person

114 See James Mottram, *Star Wars - When the Fans Hit the Sith*, INDEP. (July 9, 2010, 12:00 AM), <https://www.independent.co.uk/arts-entertainment/films/features/star-wars-when-the-fans-hit-the-sith-2021858.html> [<https://perma.cc/4NTT-B2LU>]. For a general analysis of nonowner interests “in having cultural objects with stable meanings,” see Justin Hughes, “Recoding” *Intellectual Property and Overlooked Audience Interests*, 77 TEX. L. REV. 923, 926, 987–1009 (1999).

115 See RAMANAN LAXMINARAYAN & ANUP MALANI WITH DAVID HOWARD & DAVID L. SMITH, *EXTENDING THE CURE: POLICY RESPONSES TO THE GROWING THREAT OF ANTIBIOTIC RESISTANCE* (2007); William M. Sage & David A. Hyman, *Combating Antimicrobial Resistance: Regulatory Strategies and Institutional Capacity*, 84 TUL. L. REV. 781, 787–90 (2010).

116 For a proposal to address the problem through patent law, see Eric Kades, *Preserving a Precious Resource: Rationalizing the Use of Antibiotics*, 99 NW. U. L. REV. 611, 643–59 (2005).

117 Discussed in *Rice v. Paladin Enterprises, Inc.*, 128 F.3d 233, 239 (4th Cir. 1997).

118 Interestingly, disapproval of information goods sometimes manifests as exclusions from IP protection, not necessarily accompanied by an outright ban on dissemination. The America Invents Act, for instance, included new patent law carve-outs for tax strategies and human organisms. See Leahy-Smith America Invents Act, Pub. L. No. 112-29, §§ 14(a), 33(a), 125 Stat. 284, 327, 340 (2011) (codified as amended in scattered sections of 35 U.S.C.); see also 42 U.S.C. § 2181 (2018) (disallowing patents for atomic weapons technologies). A similar sort of soft sanction in trademark law was invalidated in *Maat v. Tam*, 137 S. Ct. 1744 (2017). While various copyright and patent doctrines at one time prevented protection for creative works and inventions considered immoral, those limitations have largely fallen away. See Jennifer E. Rothman, *Sex Exceptionalism in Intellectual Property*, 23 STAN. L. & POL’Y REV. 119, 140–43, 151 (2012).

119 Commercial interests can also play a large role. The entertainment industry, for instance, lobbied vigorously for the enactment of anticircumvention laws, which bar the dissemination of technologies used to bypass technical measures copyright holders employ to control their works. The industry’s opposition to these technologies, which it likens to lockpicks, is self-evident. See Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-circumvention Regulations Need to Be Revised*, 14 BERKELEY TECH. L.J. 519, 522–23 (1999).

to sport a type of hat or haircut in order simply to fashion a unique sense of identity or personal brand.¹²⁰

The ubiquity of preferences to control and restrict ideas and information comes more fully into view once we extend our gaze beyond the domain of intellectual property proper. Privacy laws, for instance, attest to the possibility that information will generate incompatible preferences, as do other legal provisions that protect confidentiality, including testimonial privileges, classified information and state secrets laws, and the Federal Witness Protection Program. For that matter, quite apart from law, the social practice of secret-keeping is evidence of conflict over possession of information. (Interests in privacy and confidentiality also appear in intellectual property, it should be noted, including trade secrecy and copyright law¹²¹—indeed, Warren and Brandeis’s famous article on the right to privacy relied on copyright for examples of the incipient right it so famously named.)¹²² Rivalrousness is similarly evidenced by laws providing for compulsory disclosure of information, ranging from the Freedom of Information Act,¹²³ to the Clery Act,¹²⁴ securities regulations subpoena and discovery powers, and so on.¹²⁵

Indeed, many informational goods are valuable precisely because use or possession by others is sharply limited: Social Security numbers, domain names, gossip, fashion, inside jokes, status goods, cryptographic keys, signature recipes, magic tricks, and so-called nonfungible tokens (NFTs). Curated collections of all kinds frequently reflect what may be a contested choice about whether to include a particular

120 Cf. Beebe, *supra* note 16, at 825–26 (discussing status goods).

121 The National Conference of Bar Examiners (NCBE), which administers the Multistate Bar Examination (MBE), admonishes bar candidates:

The MBE is owned by NCBE and is a secure exam protected by US copyright laws. NCBE strictly prohibits copying, reproducing, or disclosing any MBE questions or answers, whether via electronic, telephonic, written, oral, or other means, to any party or to any public forum during or after the exam. NCBE will use every legal means available to protect its copyrighted materials.

Multistate Bar Examination, NAT’L CONF. OF BAR EXAM’RS (2023), <https://www.ncbex.org/exams/mbe> [<https://perma.cc/9R2U-HJWV>].

122 See Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 198–99 (1890); see also *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 554 (1985) (citing Warren & Brandeis, *supra*, at 198–99).

123 Act of July 4, 1966, Pub. L. No. 89-487, 80 Stat. 250 (codified as amended at 5 U.S.C. § 552).

124 See Student Right-to-Know and Campus Security Act, Pub. L. No. 101-542, 104 Stat. 2381 (1990) (codified as amended at 20 U.S.C. § 1092(f)).

125 See, e.g., Cynthia Estlund, *Just the Facts: The Case for Workplace Transparency*, 63 STAN. L. REV. 351 (2011) (proposing a mandatory disclosure regime for various employment-related matters).

information good. The reader of this Article may well disagree with the decision of the editors to be its publisher.

We should also note that any push for censorship can be seen as an indication of the rivalrousness of an information good. Any idea that someone would like to disseminate over the objections of someone else who considers it blasphemous or evil or socially destructive is to that extent very much a rivalrous good. Hate speech, cultural appropriation, safe spaces, fake news, revenge porn, cyberbullying, and a litany of similar hot-button issues can all be seen as manifestations of the potential for conflict over information goods. Not surprisingly, intellectual property law has been enlisted in such conflicts. Copyright litigation by religious groups seeking to suppress what they see as false doctrines is not uncommon,¹²⁶ and until recently, the government of Bavaria held the copyright to Hitler's *Mein Kampf* and used it to prevent republication of the book.¹²⁷ Indeed, the origins and development of Anglo-American copyright law owe much to Tudor and Stuart commitments of political and religious censorship.¹²⁸ Censorship was a feature of early English copyright, not a bug.

In the context of technology, meanwhile, restrictions can be matters of major national policy. The United States is committed to preventing the proliferation of nuclear weapons technology, for instance, particularly to nations like Iran. The use of such information would, to put it mildly, impose significant external costs, notwithstanding the fact that it can be possessed by multiple nations at once. Similarly, Chinese policies on technology transfer have emerged as a major international trade issue in the United States.¹²⁹ And at a more everyday level, regulation of all sorts is pervasive—just think of the Food and Drug Administration and the Consumer Product Safety Commission.

It may at first seem that conflict over uses is more likely to arise in the realm of copyright than patent because the creator of an expressive work is seen as having an expressive interest in the deployment of their

126 See David A. Simon, *In Search of (Maintaining) the Truth: The Use of Copyright Law by Religious Organizations*, 16 MICH. TELECOMMS. & TECH. L. REV. 355, 372–76 (2010). The Church of Scientology has been particularly noted for its litigiousness. See, e.g., *Religious Tech. Ctr. v. Lerma*, 908 F. Supp. 1362, 1366 (E.D. Va. 1995); *Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs., Inc.*, 923 F. Supp. 1231 (N.D. Cal. 1995); *Religious Tech. Ctr. v. F.A.C.T.NET, Inc.*, 901 F. Supp. 1519 (D. Colo. 1995); *Bridge Publ'ns v. Vien*, 827 F. Supp. 629, 632 (S.D. Cal. 1993).

127 See *Copyright of Adolf Hitler's Mein Kampf Expires*, BBC (Jan. 1, 2016), <https://www.bbc.com/news/world-europe-35209185> [<https://perma.cc/6E56-FLTZ>].

128 See LYMAN RAY PATTERSON, *COPYRIGHT IN HISTORICAL PERSPECTIVE* 21, 114 (1968).

129 See *Tariff-Based Disputes Continue to Characterize Trump Administration Trade Policies*, 112 AM. J. INT'L L. 751, 753 (2018).

work that an inventor does not, at least to the same extent.¹³⁰ But even granting the premise about creators, there is no reason to suppose that technology is less subject to contestation than expressive materials. Abortion and firearms are both technologies and can be broken down into subtechnologies. The reality, however, is that patent law is subject to some significant limitations, such as the requirement of novelty and the relatively short duration of protection, that make it difficult to use patent rights as a strategy to address externalities generated by particular technologies.¹³¹ A gun control advocate, for instance, might certainly desire to obtain a patent covering various firearms, but patent law does not make this possible. Externalities arising from the use of technologies are nevertheless quite real, as the countless laws and regulations governing the use of devices, tools, processes, and information attest, and it is important to recognize that the inability to use patent rights—rights to control the use of technologies—to mediate the resulting conflicts is substantially an artifact of the contingent structure of the legal system, rather than an indication of the absence of such conflicts.

In short, when we think about rivalrousness in terms of situations involving a resource that one person wishes to use and that another would like that person not to use, the standard story about nonrivalry of ideas and information becomes far more suspect. This is not to imply that the law should side with those who wish to deny access to information goods, much less that it should do so through a system of property rights in those goods. Rather, it is to acknowledge that the underlying conflict is the sort of problem property systems resolve. Whether and how to implement such a system is another matter.

A skeptic might respond that intellectual property rights are not limited to situations in which these kinds of conflicts arise, and so existing IP laws are at least overbroad. But observe first that property rights in physical resources aren't restricted in the manner this sort of argument implies. It would still be theft to make off with an object that the owner was planning to throw away and it would still be a trespass to enter someone else's land, even if the owner had no intention of

130 See Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L.J. 287, 351 (1988); see also Peter Lee, *Patent Law's Externality Asymmetry*, 43 CARDOZO L. REV. 1923, 1927 (2022) (noting that “[t]he economics and IP literature has largely overlooked—with a few exceptions—the potential for patented technologies to produce significant negative externalities.”).

131 See Kades, *supra* note 116, at 651–53 (advocating longer patent terms as a means to address problems of antibiotic resistance). Copyright law is at least somewhat better tailored in this regard. For one example, see *Davydiuk v. Internet Archive Canada & Internet Archive*, [2016] F.C. 1313 (Can.), in which a former pornographic model obtained copyrights to the movies and pictures in which he appeared in order to suppress distribution.

using or occupying it.¹³² The concept of property is organized in terms of control over individual resources, and its operation has a fundamentally arbitrary quality from the standpoint of purely personal interests. If a landowner purchases a two-foot-wide strip of previously public land at a remote edge of her property that she has no intention of occupying or doing anything with, it nevertheless suddenly becomes a trespass to step foot on that strip, even though it was not the day before and even though entering that strip has no other impact or effect on the landowner's ability to do anything she actually wants to do. Her expanded legal protection makes sense when we think of her rights in terms of control over uses, rather than direct interference with specific personal interests. The protections extended by traditional property law aren't limited to situations in which a conflict between two incompatible uses can be shown.

Observe as well that when it comes to tangible resources, we have a pretty expansive sense of what would count as a conflict, which is to say, a generous understanding of rivalry. Physical space, the stuff of real property law, is usually taken to be a rivalrous resource.¹³³ After all, two people cannot occupy the same place at the same time.¹³⁴ And yet . . . the earth is still a pretty big place. The total two-dimensional area occupied by the entire human race is roughly equal in acreage to New York City.¹³⁵ Now, such a compact gathering of huddled masses might not be very pleasant, but that's a bit different from being a physical impossibility.¹³⁶ The example is extreme, but the principle it illustrates is broadly true. Consider Larissa Katz's example of "the extremely skinny man who creeps into my bed in the afternoon, takes a nap, and leaves without a trace, not even an imprint on the sheets."¹³⁷

132 For a strong rejection of a right to commit harmless trespass, see *Jacque v. Steenberg Homes, Inc.*, 563 N.W.2d 154 (Wis. 1997).

133 See Hardy, *supra* note 30, at 254 ("Land, like most real and tangible property, evidences the attribute of 'rivalrous consumption.'"); see also Julie E. Cohen, *What Kind of Property Is Intellectual Property?*, 52 HOUS. L. REV. 691, 696 (2014); Sterk, *supra* note 62, at 421; Charles Blazer, Note, *The Five Indicia of Virtual Property*, 5 PIERCE L. REV. 137, 140 (2006).

134 See ROGER S. JONES, PHYSICS FOR THE REST OF US: TEN BASIC IDEAS OF TWENTIETH-CENTURY PHYSICS THAT EVERYONE SHOULD KNOW . . . AND HOW THEY HAVE SHAPED OUR CULTURE AND CONSCIOUSNESS 151 (1992) (discussing the Pauli exclusion principle, "a kind of quantum version of the rule that says two bodies cannot occupy the same place at the same time").

135 See Ana Swanson, *The Entire World Fits in New York City*, WASH. POST (Apr. 2, 2015, 7:27 AM), <https://www.washingtonpost.com/news/wonk/wp/2015/04/02/the-entire-world-fits-in-new-york-city/> [<https://perma.cc/769P-FCST>].

136 Cf. Baker, *supra* note 18, at 907 (stating that information is nonrivalrous and explaining that "[n]othing conceptually prevents everyone, without conflict, from saying the same thing, even at the same time (although it might get quite noisy!)").

137 Larissa Katz, *Exclusion and Exclusivity in Property Law*, 58 U. TORONTO L.J. 275, 303 (2008).

As she had no plans to use the bed herself, his use cannot be said to conflict with hers.¹³⁸ Yet to the extent we seek additional justification for her right to be free from the skinny man's entry beyond the simple fact of ownership, we readily find conflict by imputing to Katz interests in privacy, security, and a residuum of other somewhat nebulous and generalized concerns.¹³⁹ The point here is not that conflict is made up but that we do not adopt a particularly parsimonious attitude toward finding it.

This stands in some contrast to the way intellectual property is often analyzed. Psychological effects are readily included as part of the calculus when we define the scope of conflict over tangible goods, but they are often downplayed or excluded from consideration when it comes to ideas and information.¹⁴⁰ If a mischief-maker gives away the ending of a whodunit,¹⁴¹ the nonrivalry proposition suggests, the story itself is not harmed, just the user experience. After all, information "simply cannot be 'used up.'"¹⁴² Consumers might derive less enjoyment from a work over time, but the work itself remains pristine and unspoiled, a kind of Platonic untouchable. Ironically, one may say, intangible harms seem to count for tangible resources much more readily than for intangible ones.

There is potential here to load the conceptual dice by defining particular goods without reference to the characteristics most likely to generate conflict. If one person reveals a "secret" to another, then it may be said that the secret has been *destroyed*. If, however, we simply say that one person has communicated "information" to another that was not widely known, it is easier to say that the information itself has not changed in any way, only circumstances external to it. To some extent, the nonrivalry story draws strength from the abstract manner in which the phenomena of intellectual property are characterized,

138 And sometimes there really may be no ultimate conflict, as "sharing economy" services like Airbnb may indicate, although in their case, only on payment of a fee.

139 Measures like the British right to roam and the Scandinavian *allemansrätten* are the proverbial exceptions that prove the rule, inasmuch as they except only certain relatively limited classes of use from general trespass duties and make special provision for generalized interests like privacy. See Jerry L. Anderson, *Britain's Right to Roam: Redefining the Landowner's Bundle of Sticks*, 19 GEO. INT'L ENV'T L. REV. 375, 404–09, 435 (2007).

140 Cf. Irina D. Manta, *Hedonic Trademarks*, 74 OHIO ST. L.J. 241, 276–77 (2013).

141 See Aislinn M. Koch, *Spoiler Alert!: How Posting Predictive Spoilers About Television Shows on the Internet Is Copyright Infringement*, 42 SETON HALL LEGIS. J. 457, 464 (2018).

142 Lemley, *supra* note 30, at 1051; see also Karjala, *supra* note 16, at 1069 (stating that "intellectual property is not destroyed or even diminished by consumption" (quoting Dennis S. Karjala, Statement of Copyright and Intellectual Property Law Professors in Opposition to H.R. 604, H.R. 2589, and S. 505 (Jan. 28, 1998), <https://web.archive.org/web/20200222150539/http://homepages.law.asu.edu/~dkarjala/OpposingCopyrightExtension/legmats/1998Statement.html>)).

which tends to omit the features that give those phenomena meaning within their social context.¹⁴³ (The use of Rocky Balboa in one person's screenplay doesn't stop some other screenwriter from using the same character, for instance, but can there truly be two *Rocky IV*s?)¹⁴⁴

This brings up an important point about the overall landscape of contemporary IP law. The kinds of conflicts discussed above largely come from the general domains of copyright and patent law. These are the harder cases. In some other intellectual property arenas, most obviously the core problems trademark law addresses, matters are simpler. The subject matter of trademark law—the names by which producers of goods denominate their products—exhibits clear rivalry.¹⁴⁵ While it is true that one firm's ability to stamp the word “Coke” on its packaging does not physically prevent another firm from doing the same thing, that plainly misconceives the nature of the information good at issue. A word isn't simply a configuration of visual or other sensory material, but a symbol bearing a particular meaning. A name is a special kind of word whose purpose is to differentiate one specific entity from another. That is why it is so strange, and inconvenient, when the boxer George Foreman names all five of his sons “George Foreman” (and why each actually goes by a nickname).¹⁴⁶

This principle is baked into the deep structure of trademark doctrine. To be protected a potential trademark must be “distinctive,” meaning that it is capable of distinguishing one producer's goods from another in the minds of consumers. Generic words and symbols—those that refer to the larger category of products to which all producers belong, like “candy,” rather than “Skittles”—cannot be protected because they do not distinguish one member of the product category from another. Trademarks are quite clearly rivalrous in their use as

143 See, e.g., Note, *Digital Duplications and the Fourth Amendment*, 129 HARV. L. REV. 1046, 1057 (2016) (opining that “except for certain trade secrets or other intangible commercial property, digital data is a nonrivalrous good”). The potential to overlook social context has been noted before. See David W. Opperbeck, *The Penguin's Genome, or Coase and Open Source Biotechnology*, 18 HARV. J.L. & TECH. 167, 208 (2004).

144 See *Anderson v. Stallone*, No. 87-0592 WDKGX, 1989 WL 206431, at *18 (C.D. Cal. Apr. 25, 1989). The point here is not just that a follow-on work might change the overall cultural perception of the original, possibly in ways that represent a net social loss, see Alex Kozinski, *Mickey & Me*, 11 U. MIA. ENT. & SPORTS L. REV. 465, 469 (1994), but that the proliferation of different sequels is incompatible with the nature of a unitary narrative.

145 See Barton Beebe & Jeanne C. Fromer, *Are We Running Out of Trademarks? An Empirical Study of Trademark Depletion and Congestion*, 131 HARV. L. REV. 945, 951 (2018) (concluding that “[t]he supply of word marks that are at least reasonably competitively effective as trademarks is finite and exhaustible” and that the supply is “already severely depleted”).

146 See Bill Dwyre, *By George, He'll Carry on His Dad's Legacy in the Ring*, L.A. TIMES (Aug. 25, 2009, 12:00 AM), <https://www.latimes.com/archives/la-xpm-2009-aug-25-sp-dwyre25-story.html> [<https://perma.cc/4L7D-G5CM>].

source identifiers, at least as between commercial rivals.¹⁴⁷ The same underlying principle can be seen in related contexts like the assignment of telephone numbers, serial numbers, and other identifiers: if more than one telephone subscriber is allotted the same number, there's a problem.¹⁴⁸

But to return to the wider domain of IP law, the general claim that IP is suspect because ideas and information are nonrivalrous must ultimately rest either on an empirical or a normative supposition. As an empirical matter, it might be the case that conflicting preferences as to the use of intellectual goods are, if not nonexistent, relatively rare.¹⁴⁹ But this is not in any sense proven. To be sure, there is *clearly* much nonrivalry. People often like to share information and ideas and perceive that benefits accrue from a regime of share-and-share-alike or live-and-let-live. But the question is, how much? Because just as clearly, there are many situations in which people object to others' use of ideas and information, and it is difficult to say a priori (or perhaps more accurately, *ex cathedra*) that those situations are so uncommon they can generally be ignored.

The examples described earlier suggest a wide range of motivations to deny access to an information good. It isn't just the psychological or intellectual underpinnings of those motivations that are far-reaching, but also their potential scope. Although preferences for nonuse are often limited to uses that relate fairly directly to the motivation that underlies the preference, that may have more to do with limited access to property where those preferences can be manifested. It does not seem unlikely that a restaurateur who wishes to bar would-be patrons who support a political candidate or a cause she finds repugnant would also want to exclude those patrons from restaurants owned by others if she could. By the same token, she might well desire to deny access to those individuals to, say, air conditioning technology in August or their favorite movies. From a purely descriptive point of view, it is no answer to say that such interests are unattractive, unkind, antisocial, or illiberal. And once we consider the full ambit of human

147 As signifiers, they are generally unlikely to be rivalrous between consumers, however; one consumer's reference to "Tide" detergent does not diminish another's ability to refer to the same detergent using the same name. See David W. Barnes, *A New Economics of Trademarks*, 5 NW. J. TECH. & INTELL. PROP. 22, 23 (2006).

148 It is possible to imagine a kind of party-line system, of course, just as it is possible for the same word to have multiple meanings. The system of naming does not necessarily break down just because two things have the same name. But there is clearly a cost, which can quickly become overwhelming. There aren't many words with ten completely different dictionary meanings.

149 See, e.g., Lemley, *supra* note 30, at 1055–56.

preferences and interests, the potential for conflict is substantial, if not overwhelming.

The incentives-only view of intellectual property law also tends to conceal other considerations that may enter the equation. Even within the domain of conventional IP rights, possessive instincts, the so-called endowment effect, and similar psychological phenomena, for instance, offer plausible reasons why some creators or possessors of information goods might desire to prevent use of those goods by others. Indeed, expectations about ownership of one's intellectual creations may in many cases themselves generate a preference to bar use by others, at least in the absence of attribution or a request for permission.¹⁵⁰ There is also a danger of underestimating the prevalence of these nonpecuniary preferences because they often overlap with pecuniary ones. A songwriter might desire to charge for the use of a composition both to prevent it from being "cheapened" and to make money, for instance, but the profit motive may conceal or obscure the expressive one.

If we cannot categorically deny the possibility of preferences to exclude others, perhaps we can nevertheless reach categorical judgments about their relative weight. For example, if J.D. Salinger wants to keep his letters private, while a consuming public wants to know what they contain, it might be that the social benefits derived from publication outweigh the disutility to Salinger. After all, there is only one of him and so many more consumers of his writings. But here too the conclusion is rather facile. Interpersonal utility comparisons are problematic enough without trying to generalize about the effects of aggregating them across the whole of society. Who can really say just how strong Salinger's preference for secrecy is felt and how it compares to others' preference for revelation? One piece of evidence we have is the commercial market. The preferences of the public for access to his letters are represented, albeit imperfectly, by commercial publishers, and it does not appear there are insuperable transaction-cost barriers to their negotiating with Salinger. If readers value the diaries, there is money to be made from publishing them, and thus a strong incentive for publishers to make Salinger an offer. The fact that Salinger would not accede to such an offer provides at least some evidence that what the public was willing to pay to learn what was in his letters—and, by crude extension, the value the public derived from their publication—was less than the value Salinger placed on their continued secrecy. Perhaps more importantly, from a transaction-cost

150 See Christopher Buccafusco & Christopher Sprigman, *Valuing Intellectual Property: An Experiment*, 96 CORNELL L. REV. 1, 43 (2010); cf. Cass R. Sunstein, *Legal Interference with Private Preferences*, 53 U. CHI. L. REV. 1129, 1136–38, 1146–58 (1986) (presenting arguments against justification for legal states based on consideration of preferences caused by law itself).

perspective, it is much easier for the public-at-large to bargain for access from Salinger than for Salinger to bargain for confidentiality from every member of the public.

In short, in terms of a purely formal claim about the concept of property, conflicting preferences over resource use are entirely possible for information goods and, indeed, appear to be at least reasonably common. And from a utilitarian or economic standpoint, it is difficult to judge the extent to which overall social welfare would be promoted by allowing open access rather than rights to restrict access as a blanket matter. This is not to suggest back-of-the-envelope estimations of social welfare are categorically out of order; on the contrary, we need to rely on them all the time. But the calculation here is too broad and too contestable to support the kinds of strong conclusions that are drawn about the entire enterprise of intellectual property, once the true scope of the potential for resource conflict is appreciated.

Ultimately, the nonrivalry claim is probably more normative than descriptive. Rather than denying the existence or strength of preferences to deny others access to information goods, a normative perspective sees such preferences as illegitimate or unworthy of respect, at least in comparison to the interests of users. But this approach to the analysis of intellectual property also presents a host of issues. For a start, it is not only unacknowledged but idiosyncratic. Efficiency-based analysis ordinarily takes individual preferences as it finds them.¹⁵¹ A preference that someone else not use a resource is a preference, and if it is to be excluded from consideration, we should be clear that we are doing so and what our reasons are.

To be sure, the idea that we can dismiss such veto preferences may strike many as obviously correct. Denying someone else access to a resource without any justification apart from the sheer desire to do so might be thought of as quintessentially antisocial behavior. That such desires might be common is beside the point; a property system does not exist to vindicate the interests of jerks and cranks, or in Locke's

151 On the treatment of "bad" preferences in utilitarianism, see, for example, STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* 160–61 (1987); Robert E. Goodin, *Laundering Preferences*, in *FOUNDATIONS OF SOCIAL CHOICE THEORY* 75, 78 (Jon Elster & Aanund Hylland eds., 1986); and John C. Harsanyi, *Problems with Act-Utilitarianism and with Malevolent Preferences*, in *HARE AND CRITICS: ESSAYS ON MORAL THINKING* 89, 96 (Douglas Seanor & N. Fotion eds., 1988). Ronald Dworkin argued for the exclusion of "other-regarding" preferences. See RONALD DWORIN, *TAKING RIGHTS SERIOUSLY* 234 (1977). But see C. Edwin Baker, *Counting Preferences in Collective Choice Situations*, 25 *UCLA L. REV.* 381, 386 (1978) (criticizing this position); H.L.A. Hart, *Between Utility and Rights*, 79 *COLUM. L. REV.* 828, 842–43 (1979) (same). The preferences discussed here aren't necessarily other-regarding since it is perfectly possible to have preferences regarding another's conduct without reference to the other person's utility.

phrase, the “quarrelsome and contentious.”¹⁵² Indeed, setting aside Locke’s larger philosophical framework, his discussion of property may help ground this basic intuition of social morality. Locke argues that, first, if consent had to be obtained from everyone before a resource could be used, “man had starved, notwithstanding the plenty God had given him.”¹⁵³ The problem is not simply that bargaining for “the consent of all mankind” is too cumbersome (what we might call a transaction-cost problem), but that anyone else’s demand for consent is illegitimate, given that the earth was meant for the human race “[t]o enjoy.”¹⁵⁴ Expressing a view that seems fairly intuitive, Locke declares that no one “could think himself injured by the drinking of another man, though he took a good draught, who had a whole river of the same water left him to quench his thirst.”¹⁵⁵ Human existence is about activity and possibility, about the triumph of can over cannot.

Fair enough, but this brings us to the central difficulty. At the heart of Locke’s account of property is the extraordinary significance he attaches to appropriative labor. But while laziness may still be viewed as a vice, nonuse is more clearly a repository of value today, not simply because conservation may actually maximize value by enabling higher levels of use over the long term, but because consumption itself is not considered an unmitigated good.¹⁵⁶ We no longer offer unequivocal support for the appropriation of the exterior world.¹⁵⁷ Thus, the further challenge for a defense of normative preference-filtering is to articulate its boundaries. Even if we accept that exclusion “for its own sake” is an impulse that should not be counted,¹⁵⁸ we need to have some means to determine the scope of this principle. What is the difference between a desire to exclude someone as an end in itself and a desire to exclude the person because you disapprove of their conduct, or simply dislike them? More pointedly, is it wrong to deny someone access to information because you think the information is “private”? Because you take pleasure in knowing secrets? Because the information will enable the recipient to take advantage of vulnerable people? Because the information reflects poorly on you? Because the

152 See JOHN LOCKE, SECOND TREATISE OF GOVERNMENT § 34, at 21–22 (C.B. Macpherson ed., Hackett Publ’g Co. 1980) (1690).

153 *Id.* § 28, at 19.

154 *Id.*; *id.* § 31, at 20 (emphasis omitted).

155 *Id.* § 33, at 21.

156 Cf. John G. Sprankling, *The Antiwilderness Bias in American Property Law*, 63 U. CHI. L. REV. 519, 563–64, 569 (1996) (criticizing biases against preservation and conservation in property law).

157 See Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 84 (1985).

158 See Yun-chien Chang & Henry E. Smith, *An Economic Analysis of Civil Versus Common Law Property*, 88 NOTRE DAME L. REV. 1, 10 (2012); see also J.E. PENNER, THE IDEA OF PROPERTY IN LAW 70–71 (1997).

information will corrupt the recipient's ethics? Because you do not want the information becoming commonplace? It is worth noting that among those who align with the "information-wants-to-be-free" school, there is also considerable support for robust privacy protections in a range of areas.¹⁵⁹ Matters are not as simple as sloganeering tends to suggest. It may well be possible to articulate a general theory to help distinguish "good" exclusion from "bad," but doing so requires some heavy lifting.

Similarly, to the extent the preference for access over exclusion in the context of expressive works derives from notions about freedom of speech, we should first acknowledge that it is free speech principles, not merely some technical characteristic of ideas themselves, that underlies aversion to using IP rights to limit the dissemination of disfavored expression.¹⁶⁰ Again, there is nothing obviously wrong with this, but it is still the case that arguments grounded in nonrivalry are only plausible because of strong normative priors. And again, figuring out how to manage the interface between intellectual property and free speech commitments is not easy. Like many others who study intellectual property, I broadly share what might be called the general Enlightenment faith in human reason and the dissemination of knowledge. But it is a "faith-based" view of intellectual property nonetheless, and its dogmas contain their fair share of mystery.¹⁶¹

* * *

None of what has been said here is meant to deny that there are important differences between IP goods and more traditional property, as indeed there are important differences between all sorts of propertizable things—investment securities, beachfront land, oil deposits, waterways, livestock, and so on. Rather, the point has been to call into question the simple maxim that IP goods are nonrival and the suggestion that IP law stands on a fundamentally different footing from ordinary private property in ways that call the very idea of intellectual property into question. That claim arises either from assumed empirics or unstated moral reasoning, either of which might ultimately be correct but neither of which has been shown to be. It is plainly true that two violinists on opposite sides of the globe can play the same concerto at the same time, but not the same violin, and that this is a

159 See, e.g., *NSA Spying*, ELEC. FREEDOM FOUND., <https://www.eff.org/nsa-spying> [<https://perma.cc/S2DK-ST5X>]; see also Lawrence Lessig, *The Architecture of Privacy*, 1 VAND. J. ENT. L. & PRAC. 56, 63 (1999).

160 Cf. Amartya Sen, *The Impossibility of a Paretian Liberal*, 78 J. POL. ECON. 152, 155–56 (1970) (discussing potential for conflict between political liberalism and Pareto efficiency given preferences for illiberal states of affairs and illustrating with example of hypothetical conflict over *Lady Chatterly's Lover*).

161 See generally Lemley, *supra* note 65.

potentially significant fact. So long as everyone simply wants the concerto played as much as possible, there is not much need for property to step in from the standpoint of resolving resource conflict.¹⁶² But “so long as” is a critical caveat and cannot be assumed away, at least when it comes to drawing definitive conclusions about intellectual property as a whole.

C. *Economics Revisited: On the Concept of Marginal Cost*

Given the origins of the rivalrousness terminology in public goods economics, some may object that the understanding of nonrivalry advocated here departs from prevailing economic understanding by neglecting the proposition that ideas and information can be consumed at zero or low marginal cost. The simplest response to this objection is simply that the thesis of this Article can be rephrased in the language of marginal cost: if marginal cost represents a *complete* statement of the downsides of any given use of an information good—the marginal social cost—then it is often quite doubtful that marginal cost is indeed zero. If lost consumption opportunities are part of the marginal cost, what reason could there be for excluding other external costs from consideration?¹⁶³ From an efficiency perspective, it does not make sense to count congestion effects as an ingredient of marginal cost but to exclude other external costs.¹⁶⁴

If the objection is to using the specific word “rivalry” to refer to the existence of resource conflicts or to external costs generally (rather than just those involving lost consumption opportunities), then the point being made here can easily be redescribed to meet the objection. Instead of saying information is nonrivalrous, one may simply say that the nonrivalry of information does not support the conclusions drawn from it. In other words, this objection is purely semantic and easily accommodated through rephrasing. This is a friendly amendment and the underlying point still stands. That said, if the nonrivalry story is wrong, it would probably be best to rethink the idea of rivalrousness itself, rather than its implications. As the economist Richard Musgrave observed, “semantics, as the history of economic thought so well shows,

162 Setting aside any need to establish intellectual property rights for the sake of encouraging future production of intellectual goods.

163 See David W. Barnes, *Congestible Intellectual Property and Impure Public Goods*, 9 NW. J. TECH. & INTEL. PROP. 533, 551 (2011) (stating that marginal cost is positive to the extent “consumption of a good *does* detract, even in the slightest, from the consumption opportunities available for others”).

164 Cf. Frischmann, *supra* note 83, at 155 (“Put in economic terms, rivalrousness of consumption is a function of the marginal cost of allowing an additional person to consume a good.”). By the same token, positive externalities, including network effects, diminish marginal cost.

is not a trivial matter.”¹⁶⁵ We should take him at his word; after all, he invented the term nonrivalrous.¹⁶⁶

A few other comments are also in order about the notion of zero marginal cost in the IP context as economic orthodoxy. As noted earlier, equating the shared characteristic of public goods with zero marginal costs is not consistent with the public goods concept developed by Samuelson and others, which centered on problems of underproduction, rather than access or distribution—on dynamic, rather than static, efficiency, in other words.¹⁶⁷ The point is not just that the authority of technical economics is invoked with questionable justification. There is a danger that overreliance on formal economic concepts to represent what are ultimately fairly simple ideas ends up distorting the nature of the issues involved. The zero-marginal-cost proposition essentially reconceptualizes questions of distribution (access) as questions of production—each instance of access to a shareable good is reimagined as producing a new unit of the good. This tends to confuse the analysis of both production and consumption. On the production side, equating nonrivalry with zero marginal cost distracts attention from the joint-consumption problem at the heart of Samuelsonian public goods analysis, leading to misunderstandings both of the conditions that lead to market failure and of the nature of the solutions that may overcome it.¹⁶⁸ On the consumption side, by recasting the marginal cost of producing information goods as the marginal cost of consuming them, it becomes easy to conclude that because a good is shareable, consumption is socially costless.

Indeed, to speak of marginal cost in the context of jointly consumed goods verges on a category mistake. The point of the concept of marginal cost is about marginal units; it is useful to the problem presented by private goods, which is determining the optimal quantity—the number of units—of the private good to produce. But with a public good, the question is not how much of a good to make but whether to make it at all. In that sense, there is no marginal unit whose

165 Musgrave, *supra* note 37, at 142.

166 See Maxime Desmarais-Tremblay, On the Definition of Public Goods: Assessing Richard A. Musgrave’s Contribution 12–13 (Feb. 25, 2014) (unpublished manuscript), <https://shs.hal.science/halshs-00951577> [<https://perma.cc/YD2D-9JU8>].

167 See *supra* Section I.C.

168 Thus, as Christopher Yoo argues, even if it is expensive to make additional copies of a copyrighted work—i.e. marginal costs are *not* low—the preference-revelation problems associated with the Samuelson condition can still arise. See Christopher S. Yoo, *Copyright and Public Good Economics: A Misunderstood Relation*, 155 U. PA. L. REV. 635, 672–73 (2007). Further, the notion that nonrivalry is tantamount to zero marginal cost implies, incorrectly, that what is needed to resolve pricing questions for public goods is simply to discount prices for those who value a good at less than its otherwise uniform price, rather than to engage in price discrimination across the entire range of demand. See *id.* at 673–74.

cost is to be compared against its benefits. Consistent with the Samuelson condition, optimality depends on a comparison of the total benefits to all consumers with the cost of producing the single unit they can jointly consume.¹⁶⁹

The notion of marginal cost is essentially used to fit intellectual property problems into familiar rubrics of natural monopoly and declining average costs by borrowing public goods terminology. These fields may indeed provide resources helpful to understand intellectual property, but care must be taken not to distort and oversimplify the multifaceted phenomena at issue to reach predetermined conclusions. Here, as elsewhere in the analysis of intellectual property, “[o]ne may be suspicious that the attention may be prompted by its neatness of fit into the pre-existing concept of a public good more than the underlying realities of what properties information holds.”¹⁷⁰

III. IDEAS, INFORMATION, AND LAW

The focus of attention thus far has been a proposition about the nature of ideas and information and the broad conclusion drawn from it that proprietary rights in information goods are conceptually inappropriate and substantively problematic. Just what all this means for legal doctrine in intellectual property and related areas is complex. Moving beyond the simple nonrivalry story entails a reorientation in our thinking about intellectual property and the issues it implicates, and the precise effects of such a reconsideration are hard to predict. What follows, however, are ways in which rethinking the nonrivalry story can illuminate or reshape some specific legal problems.

A. *IP as Control Rights*

The received wisdom about rivalrousness makes some basic features of intellectual property law rather puzzling. The possibility that conflict may arise regarding the use of information goods, and that proprietary rights are a ready tool to resolve those conflicts, can help explain these features.

1. Use Requirements and Compulsory Licensing

First, it is worth noting that neither patent nor copyright law makes protection dependent on right holders actually putting their works to use. A patent holder is not required to practice or license its

169 See *supra* Section I.B.

170 Tim Wu, *An Introduction to the Law & Economics of Information* 16 (Columbia L. & Econ. Working Paper No. 482, 2016), <https://ssrn.com/abstract=2446577> [<https://perma.cc/D58M-4XBV>].

invention,¹⁷¹ and a copyright holder is not required to publish its work or make it available to anyone else.¹⁷² Both bodies of law provide rights holders with substantial authority to prevent others from using their IP for any reason or no reason at all. Perhaps this can be accounted for on purely practical grounds, but on its face, it is in some tension with the proposition that IP law has no job to play in mediating conflicts over the use of resources.¹⁷³

Similar dynamics can be seen at work in one of the few instances where federal intellectual property statutes provide for compulsory licensing, the so-called “mechanical” license created by the Copyright Act.¹⁷⁴ Compulsory licensing allows users of protected materials to pay a statutorily determined royalty, rather than obtain permission from the right holder, and fits well with instrumentalist accounts of IP law since it only protects a rights holder’s revenue interest. The mechanical license in copyright allows users to make and distribute recordings of a copyrighted nondramatic musical composition if the rights holder has already permitted the release of a recording of the work to the public.¹⁷⁵ But, curiously, the mechanical license explicitly excludes any arrangement that “change[s] the basic melody or fundamental character of the work.”¹⁷⁶ The House report accompanying the provision comments that the mechanical license is not meant to allow copyrighted music to be “perverted, distorted, or travestied.”¹⁷⁷ But why not, so long as rights holders are paid?

One way to understand the mechanical license is as an attempt to simulate an actual voluntary license agreement in situations where it is thought negotiations between users and rights holders would be too

171 See *Cont’l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 424 (1908).

172 See *Stewart v. Abend*, 495 U.S. 207, 228–29 (1990) (“[N]othing in the copyright statutes would prevent an author from hoarding all of his works during the term of the copyright. In fact, this Court has held that a copyright owner has the capacity arbitrarily to refuse to license one who seeks to exploit the work.” (citing *Fox Film Corp. v. Doyal*, 286 U.S. 123, 127 (1932))). Previous iterations of the federal copyright statutes did tie protection to publication, leaving protection of unpublished works to the common law. See H.R. REP. NO. 94-1476, at 129 (1976); see also *Am. Tobacco Co. v. Werckmeister*, 207 U.S. 284, 300 (1907) (stating that “it is the author’s right to withhold his property, or only to yield to a qualified and special inspection”).

173 Compare Oskar Liivak & Eduardo M. Peñalver, *The Right Not to Use in Property and Patent Law*, 98 CORNELL L. REV. 1437, 1481 (2013) (arguing that patent law should provide a weaker right of nonuse than tangible property law because consumption of information is nonrivalrous), with Lior Jacob Strahilevitz, *The Right to Destroy*, 114 YALE L.J. 781, 811–12 (2005) (discussing possible incentive value of a right to suppress uses of patented inventions).

174 See 17 U.S.C. § 115 (2018).

175 *Id.*

176 *Id.* § 115(a)(2).

177 H.R. REP. NO. 94-1476, at 109.

cumbersome.¹⁷⁸ On this understanding, the scope and limits of the mechanical license can be seen as a plausible approximation of those situations where the copyright holder won't have strong objections. If the copyright holder has already allowed a recording of the musical work to be released to the public and additional recorded copies do not differ markedly from the version already in public circulation, it is reasonable to suppose copyright holders on the whole would prefer the additional recordings be released in exchange for receipt of royalties that, it is assumed, would otherwise be impractical to collect. Where, however, the cover "perverts" the original, consent to license at a standard rate is much less likely.¹⁷⁹ These generalizations won't always hold, but the assumed transaction-cost barriers make it necessary to generalize one way or the other. Alternatively, one can instead read the provision as embodying a judgment that a copyright holder's desire to restrict access altogether is generally illegitimate when similar access has already been granted, but not where something new and potentially offensive to the right holder is being proposed. Either way, the upshot is that what at first appears to be one of the most clearly incentives-based aspects of IP law appears on further examination not only to recognize the potential for conflicts over use but to structure IP protection in terms of predictions about where those conflicts are likely to arise, and perhaps to offer judgments about how they should be resolved in different situations.

2. Moral Rights

The universe of copyright protections is often divided between "economic rights" and "moral rights." Economic rights refer to a copyright holder's entitlement to be compensated when someone else reproduces, displays, or distributes copies of a protected work and are squarely associated with the instrumentalist, incentives-based view of intellectual property predominant in the United States. Moral rights, by contrast, are said to protect a creator's nonpecuniary interests in controlling the use of a protected work and are associated with continental European legal traditions. These sorts of protections include

178 See Robert P. Merges, *Of Property Rules, Coase, and Intellectual Property*, 94 COLUM. L. REV. 2655, 2669 (1994). This does not, of course, mean that the statute correctly identifies such situations, nor that it provides a royalty approximating actual negotiations between the parties.

179 Alternatively, and equally consistent with the argument of this Article, one could interpret the provision less in terms of the likelihood of copyright holders objecting than about the relative harms of getting it wrong; in other words, the provision may reflect the conclusion that the magnitude of the harm to an objecting rights holder tends to be especially great in the case of a cover that changes the "fundamental character" of the work, even if copyright holders would not object to such covers.

creators' rights to require attribution and to prevent destruction or mutilation of their works. The rationale for these rights is noninstrumental: an expressive work is taken to be an extension of the artist who created it, which is in turn taken to give the creator a normative claim to control important aspects of its disposition.¹⁸⁰ Explicit incorporation of European-style moral rights in U.S. copyright law is relatively recent and remains controversial. Whatever the merits of these developments, the very fact that artists assert moral rights, and that they have defenders who believe these rights should be respected, provides more evidence from the real world in support of the central thesis of this Article. If one person wants to "mutilate" a work and another wants that person to refrain from doing so, there is quite clearly a resource conflict that might plausibly be resolved through a property mechanism.

While the argument developed in this Article does not imply that moral rights must be recognized, it does undermine the notion that there is no conceptual space for such rights to operate. Even—or perhaps especially—those who reject deontological justifications for IP as such may not dismiss all "ex post" justifications for IP out of hand.¹⁸¹ From the standpoint of preference-satisfaction, what matters are actual preferences that form, not the reasons for their formation.¹⁸² And in terms of conventional accounts of private property as an institutional mechanism to reduce externalities and facilitate exchange, the fact that belief in moral rights generates conflicts over the use of resources is sufficient to establish the possibility that a property-like system may be warranted. Whether such a system is, in fact, appropriate and, if so, what form it should take are empirical questions that depend on context, rather than simple a priori maxims about the nature of information.

3. Fair-Use Doctrine

The fair-use doctrine in copyright law provides a defense to copyright infringement in certain circumstances in which an otherwise-infringing use is deemed "fair."¹⁸³ In keeping with the incentives-based

180 See Roberta Rosenthal Kwall, *Copyright and the Moral Right: Is an American Marriage Possible?*, 38 VAND. L. REV. 1, 2 (1985) (arguing that "[b]ecause copyright law protects works that are the product of the creator's mind, heart, and soul, a degree of protection in addition to that which guarantees financial returns is warranted" (footnote omitted)).

181 See Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 130–31, 143–47 (2004) (distinguishing between "ex ante" and "ex post" IP justifications).

182 See Howard F. Chang, *A Liberal Theory of Social Welfare: Fairness, Utility, and the Pareto Principle*, 110 YALE L.J. 173, 187 (2000).

183 See 17 U.S.C. § 107 (2018).

view of IP, the effect on actual and potential markets for the copyrighted work is considered “the single most important element of fair use.”¹⁸⁴ In essence, this means showing that permitting the challenged use will not diminish the economic returns the copyright holder might otherwise be able to earn, whether through its own sales or through licensing to others, including the alleged infringer.

Despite its importance to fair-use analysis, the significance of economic impact can be overstated. Thus, on the one hand, fair-use claims have been rejected even in cases where copyright holders have made clear their intention to forbid any dissemination of their creations altogether—a result that strikes Judge Pierre Leval as “bizarre and contradictory” from the standpoint of his incentives-only understanding of copyright.¹⁸⁵ After all, if the copyright holder is dead set against any commercialization of their work, someone else’s distribution of the work is not going to cause any loss of profits. As should be clear by now, however, the possibility of conflicts when it comes to the use and disposition of copyrighted works remains. Denying a fair-use defense may or may not be the right result, but it is at least plausible when we consider the conflict between one person’s interest in disclosure and another’s interest in preventing use or disclosure.

On the other hand, fair-use defenses have received favorable treatment in certain situations where, although copyright holders might be reluctant to grant a license, there are no apparent practical difficulties that would impede license negotiation, most notably in cases involving criticism and parody.¹⁸⁶ In *Campbell v. Acuff-Rose Music, Inc.*, its leading decision in this area, the Supreme Court sought to draw a distinction between parody and satire, the idea being that parody mocks (and thus comments on) the original by borrowing and distorting elements of it, while satire copies elements from the original to make a point about some other subject.¹⁸⁷ Fair-use doctrine should be more solicitous

184 *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 566 (1985) (citing 3 M. NIMMER, COPYRIGHT § 13.05[A], at 13–76 (1984)).

185 See Pierre N. Leval, Commentary, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105, 1119 (1990). Unsurprisingly, Judge Leval does not actually fail to recognize the existence of substantive interests in preventing others from disseminating information but he asserts that copyright law should ignore them because interests like privacy and authorial autonomy can be protected by bodies of law specifically addressed to them. See *id.*; see also Jessica Litman, *Copyright and Information Policy*, LAW & CONTEMP. PROBS., Spring 1992, at 185, 203. This is a respectable position, but it tends to sell the institution of property short. Ordinary trespass laws can be said to protect a wide range of interests, including some that are hard to name or define, and it would normally be uncontroversial to defend trespass laws on the ground that, among other effects, they contribute to personal privacy.

186 Cf. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 572–74 (1994) (noting that parties had in fact discussed the possibility of licensing the parodied composition).

187 See *id.* at 580–81.

toward parody than satire, the Court explained, because a parodist needs to borrow material from the original to execute the parody, while a mere satirist has a range of alternative sources from which to draw.¹⁸⁸ This argument evades the basic question, however, which is why the parodist's need should overcome the copyright holder's rights in the first place.¹⁸⁹

Something else seems to be at work behind the scenes. Quite apart from assessments of the degree of necessity faced by different copyists, fair-use doctrine appears to embed an evaluation of the normative attractiveness of the copyright holder's grounds for objection. Elsewhere in *Campbell*, the Court tipped its hand, suggesting that an unauthorized parody would not undermine a market for licenses to criticize the protected work because it is unlikely a copyright holder would agree to such a license, and thus there was no potential licensing market to protect.¹⁹⁰ Yet surely there are copyright holders who would license a parody at *some* price; the Court's implicit premise was that the additional premium a copyright holder would charge to allow criticism should not be considered. This assumption was unexplained, however, and the Court apparently felt it needed to downplay the normative character of its reasoning and explain its conclusions in the language of incentives and markets. It is not unreasonable to suppose that this is the result of a legal orthodoxy that denies the role IP rights can play in mediating resource conflicts.¹⁹¹ At any rate, what is needed in fair-use doctrine is a more honest acknowledgment of the nature of the problem of conflicting programs of use where they arise and an attempt to supply criteria to explain when demands for access to copyrighted works trump claims to control use and when they do not.

4. Censorship and Authority

A final point to be made about IP, and legal treatment of information goods more generally, relates to the functions IP rights can plausibly perform and the interests that lie in back of them. IP theory embraces an understanding of IP focused on production—incentives to generate information goods, and the social cost that those incentives

188 *See id.* (stating that parody “needs to mimic an original to make its point . . . whereas satire can stand on its own two feet and so requires justification for the very act of borrowing”).

189 Perhaps the possibility of monopoly, particularly of bilateral monopoly, creates a risk of bargaining breakdown, but there is no suggestion in its opinion that the Court was thinking along these lines.

190 *See Campbell*, 510 U.S. at 592 (stating that “there is no protectible derivative market for criticism”).

191 *See generally* Andrew Gilden, *Copyright's Market Gibberish*, 94 WASH. L. REV. 1019 (2019).

entail—largely by ignoring conflicts concerning the use of information goods in existence. Conceptually, such problems tend to be written off as the concerns of other legal domains: privacy law, for instance, or free speech or national security or product liability, and so on. But the issues can and do manifest in the domain of IP. Is it appropriate to use IP to suppress revenge porn? Lethal injections? Hate speech? As a general matter, no one doubts the ability to rely on ownership of tangible property, or even intangibles like money, to prevent such items from circulating. Should IP be different? Whatever else may be said, it is not an answer to problems of this kind to say information goods are different because they are nonrivalrous. The fact that two people can both watch the same video clip without interfering with one another simply does not bear on the question of what to do when one person wants another to refrain from watching it for reasons wholly unrelated to any possibility of interference.

B. *Privacy and Data Seizures*

As a general matter, “the nonrivalrous aspect of intellectual property infringement” is said to “weaken[]” the argument for constitutional protection of rights in information.¹⁹² Although in several cases, the Supreme Court has expressed the view that various IP rights qualify as property for constitutional purposes,¹⁹³ the treatment of IP under the Constitution’s Takings and Due Process Clauses is still uncertain.¹⁹⁴ And here it bears noting that claims to control information goods aren’t limited to the confines of those legal fields formally denominated as intellectual property. The wide domain of problems broadly lumped together under the banner of privacy involve conflicts between use and nonuse of information, and here again, ideas about nonrivalry can distort the legal treatment of information goods, most strikingly when it comes to copying information under the Fourth Amendment.

The Fourth Amendment protects against “unreasonable searches and seizures,”¹⁹⁵ and it is an open question whether a police officer who copies data from a person’s computer conducts a “seizure” for Fourth Amendment purposes.¹⁹⁶ Clearly copying someone else’s

192 Mark A. Lemley & Eugene Volokh, *Freedom of Speech and Injunctions in Intellectual Property Cases*, 48 DUKE L.J. 147, 184 (1998).

193 See, e.g., *Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 642 (1999); *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1001–04 (1984).

194 See, e.g., *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1379 (2018).

195 U.S. CONST. amend. IV.

196 The problem is older than digital communications, see, e.g., *Bills v. Asetline*, 958 F.2d 697, 707 (6th Cir. 1992); *United States v. Thomas*, 613 F.2d 787, 789 (10th Cir. 1980) (holding that FBI did not effect a seizure when it photocopied defendant’s documents),

electronic files will often run contrary to that person's interests in security, peace of mind, autonomy, and a range of other values. The loss of privacy, for instance, certainly does not seem much greater if a police officer carries off paper folders in a metal filing cabinet—which would indisputably count as a seizure—rather than the electronic folders on a digital hard drive.¹⁹⁷ Yet some courts have concluded that electronic copying does not constitute a Fourth Amendment seizure.¹⁹⁸ Why not? Fourth Amendment protection in general and protection against seizures in particular are closely connected with property, and the same misconception about the nature of information used to separate IP from property has been employed to drive an artificial wedge between seizures of physical objects and seizures of information.¹⁹⁹

The problem comes wrapped in doctrine. The Supreme Court has defined a seizure of property as a “meaningful interference with an individual’s possessory interest in that property.”²⁰⁰ It is thought,

but by making it easier to copy information, digital technologies have brought the issue to the forefront.

197 Though greater stress is laid on purposes other than privacy with seizures of things than with searches, privacy remains an important purpose of protection against seizures.

198 See *In re Application of United States*, 665 F. Supp. 2d 1210, 1215 (D. Or. 2009); *United States v. Gorshkov*, No. CR00-550C, 2001 WL 1024026, at *3 (W.D. Wash. May 23, 2001). Several other decisions have considered whether copying information by other means such as photography and photocopying constitutes a seizure, with most concluding it does not. Compare *Bills*, 958 F.2d at 707, and *Thomas*, 613 F.2d at 793, with *United States v. Jefferson*, 571 F. Supp. 2d 696, 704 (E.D. Va. 2008). See also *Carpenter v. United States*, 138 S. Ct. 2206 (2018). One reason why the question of seizures, as opposed to searches, matters is because the mere acquisition of information-containing materials might not be considered a search if no examination takes place. In addition, protection against seizures is not necessarily limited to those materials in which an individual has a “reasonable expectation of privacy.” The Supreme Court’s decision in *Carpenter v. United States* suggests a growing solicitude by the Supreme Court to privacy-based claims in connection with digital technology, but did not address these issues. Its treatment of the “third party doctrine,” moreover, while eliminating any per se Fourth Amendment exemption for records compiled by third parties, purported to leave existing precedents in place and made clear that protection depended on the extent to which expectations of privacy were reasonable in light of third-party possession. See *id.* Interestingly, two Justices who did not join the majority expressed interest in the idea of linking protection of information possessed by third parties to property or similar rights in the information, an approach that might be thought to narrow the search/seizure gap.

199 See *United States v. Saboonchi*, 990 F. Supp. 2d 536, 565 n.16 (D. Md. 2014) (“It is not entirely clear whether retaining an image of electronic data constitutes a ‘seizure[.]’” since “electronic information is ‘nonrivalrous. It simply cannot be “used up.”” (quoting Lemley, *supra* note 181, at 143)); see also Paul Wolfgramm Jr., Note, *Power and Responsibility: Fourth Amendment Limits on the Use of Molecular Scanners*, 22 WM. & MARY BILL RTS. J. 243, 268 (2013) (stating that unlike physical evidence, “information is nonrivalrous” and that as a result, “most courts have found that no seizure occurs when the government copies or reproduces data”).

200 *United States v. Jacobsen*, 466 U.S. 109, 113 (1984).

however, that “computer data is nonrivalrous: investigators can obtain a perfect copy without depriving the owner of the original.”²⁰¹ This perspective shapes the way the “possessory interest” protected by the Fourth Amendment is conceptualized, leading some to conclude that acquiring possession of information by government officials cannot constitute a seizure unless it results in an equal and opposite dispossession on the part of others.²⁰² There is another way to understand the situation, however. Unauthorized acquisition or retention of information can be said to interfere with an interest in *controlling* possession generally, as opposed simply to an interest in being able to possess oneself.²⁰³ This is why the *exclusive* right to possess is commonly listed as one of the essential constituents of property—the right not only to possess but to forbid possession by others.²⁰⁴

On the view that information can be and often is highly rivalrous because one person wants another not to have it or use it, the Fourth Amendment conflict becomes less obscure. The very fact of the dispute between the person whose information is copied and the investigator who copied it demonstrates the rivalry. A criminal defendant wants information not to be used or possessed by the government; the government wants to use and possess it. Although denying the Fourth

201 See Orin S. Kerr, *Searches and Seizures in a Digital World*, 119 HARV. L. REV. 531, 560 (2005); see also *Saboonchi*, 990 F. Supp. 2d at 566 n.16; Wolfgramm, *supra* note 199, at 268 (quoting Kerr, *supra*, at 560); Note, *supra* note 143, at 1057 (“In most instances, the possession of data by another will not undermine the original owner’s use or enjoyment.”). Professor Kerr, however, has argued that copying data generally should be treated as a seizure, even though “[d]ata is nonrivalrous, so the government can create a copy of the data in a way that does not take away the suspect’s possession of his own copy.” See Orin S. Kerr, *Fourth Amendment Seizures of Computer Data*, 119 YALE L.J. 700, 712, 711–13 (2010).

202 See *supra* note 200. It is unclear how the Supreme Court would address this issue. In *Arizona v. Hicks*, 480 U.S. 321 (1987), the Supreme Court declared, without further explanation, that a police officer’s act of recording stereo equipment serial numbers didn’t meaningfully interfere with a possessory interest in the numbers so as to constitute a seizure. *Id.* at 324 (citing *Maryland v. Macon*, 472 U.S. 463, 469 (1985)). On the other hand, in two seminal though older cases, the Court seemed to suggest that eavesdropping might constitute a seizure as well as a search. See *Berger v. New York*, 388 U.S. 41, 59 (1967); *Katz v. United States*, 389 U.S. 347, 353 (1967).

203 Cf. Paul Ohm, *The Olmsteadian Seizure Clause: The Fourth Amendment and the Seizure of Intangible Property*, 2008 STAN. TECH. L. REV. 2.

204 See A.M. Honoré, *Ownership*, in OXFORD ESSAYS IN JURISPRUDENCE 107, 112–15 (A.G. Guest ed., 1961) (listing the right to exclusive possession as the first of eleven “standard incidents” of private property, *id.* at 112); see also Margaret Jane Radin, *The Liberal Conception of Property: Cross Currents in the Jurisprudence of Takings*, 88 COLUM. L. REV. 1667, 1667 (1988) (stating that the “classical liberal conception of property embraces a number of broad aspects or indicia, often condensed to three: the exclusive rights to possession, use, and disposition”); cf. *Martin v. Reynolds Metals Co.*, 342 P.2d 790, 792 (Or. 1959) (stating that law of trespass protects against an “invasion of a possessor’s interest in the exclusive possession of land”).

Amendment claimant access to the information would be a further injury, the government's obtaining access is clearly detrimental in itself, even if the claimant's access is undiminished. It is not hard to imagine that someone does not remember what they wrote in an email two years ago and would not really care if the email were permanently erased but might very much care if someone else were permitted to read the message. In many cases, we are far more interested in preventing others from acquiring information about us than in having access to that information ourselves. The irony is that the nonrivalry idea operates to resolve the conflict that rivalrousness entails by essentially denying that there is any conflict.

The basic analysis here is consistent across constitutional doctrine. The fact that a person might still have access to the information being acquired should not preclude the conclusion that someone forced to reveal protected trade secret has had property "taken" for purposes of the Constitution's takings guarantee.²⁰⁵ It should not preclude the conclusion that someone whose patent or a copyright has been revoked has been "deprived" of property within the meaning of the Constitution's Due Process Clauses.²⁰⁶ And it should not preclude the conclusion that someone whose information has been copied has experienced a potentially unreasonable "seizure" under the Fourth Amendment. That is not to say that any acquisition of information by government officials necessarily amounts to a Fourth Amendment seizure, or any other constitutional violation, but the circumstances in which copying or acquiring information constitutes a seizure is a topic beyond the scope of this discussion.²⁰⁷ For present purposes, it is enough to say that such a characterization cannot be categorically dismissed.

C. Rethinking IP: Some Additional Implications

Finally, it is worth noting a few broad types of problems in which reconsidering the nonrivalry story may alter the development of legal doctrine. Three are very briefly sketched here: remedies for unauthorized or compulsory uses, monopoly-talk and the public rights doctrine, and issues involving the interpretation of legal sources, including the Constitution's IP Clause.

205 See *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1013 (1984).

206 See *Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank*, 527 U.S. 627, 642 (1999).

207 A general approach to such questions that would give significant weight to IP rights afforded by positive law is outlined in William Baude & James Y. Stern, *The Positive Law Model of the Fourth Amendment*, 129 HARV. L. REV. 1821 (2016).

1. Remedies: Just Compensation

One of the most significant ways in which the nonrivalry story can affect IP law is in the determination of remedies. The discussion here will focus on the measure of damages, and in particular on “just compensation” for constitutional takings, although the same issue can come up in ordinary damages suits and common law actions for conversion. So, for example, in situations where a party is forced to supply confidential proprietary information, courts have concluded no compensation is owed so long as the information is protected from disclosure to competitors or the public.²⁰⁸ The party acquiring confidential information does not have to compensate the party from whom it is acquired because “[c]onfidential information is a form of nonrivalrous property,” meaning that the acquiring party can use the information without detracting from the ability of the party supplying the information to do so.²⁰⁹ In a similar vein, it has been suggested that no compensable taking is committed if the government merely infringes a patent, as opposed to terminating or reassigning it.²¹⁰

In practical terms, this means compensation for compulsory provision of proprietary confidential information can only be based on the supplier’s lost sales to third parties (if any), and not a royalty or licensing fee that could otherwise be obtained if the government paid for its own use, and that for governmental patent infringement, there is no compensation at all. But whether a right holder might still wish either to use the information themselves or license it to some third party is beside the point if the right holder seeks to control access by the very entity that has acquired it.²¹¹ So far as the concept of property is concerned, the ability to prevent use by others is as much a part of a proprietor’s right as the ability of the proprietor to use the resource themselves.²¹²

208 See *Klay v. All Defendants*, 425 F.3d 977, 985–86 (11th Cir. 2005) (interpreting subpoena provisions of the Federal Rules of Civil Procedure in light of takings doctrine); *In re Domestic Drywall Antitrust Litig.*, 300 F.R.D. 234, 251 (E.D. Pa. 2014); see also *Ruckelshaus*, 467 U.S. at 1011–12.

209 *Klay*, 425 F.3d at 985.

210 See *Zoltek Corp. v. United States*, 442 F.3d 1345, 1350–53 (Fed. Cir. 2006), *vacated en banc*, 672 F.3d 1309 (Fed. Cir. 2012).

211 See generally Peter DiCola, *Valuing Control*, 113 MICH. L. REV. 663 (2015).

212 Indeed, within intellectual property law itself, it is no answer to an infringement claim that the right holder experienced no lost sales or other commercial injury; an infringer may still be required to pay a reasonable royalty for infringed materials. See 35 U.S.C. § 284 (2018). Compensation for patent infringement claims against the federal government cognizable under the Tucker Act is reckoned similarly. See *Leesona Corp. v. United States*, 599 F.2d 958, 973 (Ct. Cl. 1979).

2. Monopoly-Talk and the Public Rights Doctrine

Intellectual property rights—copyright and patent especially—are frequently described as limited or statutory monopolies, a characterization that tends to suggest such rights are exceptional and disfavored.²¹³ Most IP rights do not, however, confer monopolies in the economic sense of market power, which depends both on levels of actual demand and on the availability of substitute goods.²¹⁴ There is no monopoly in the economic sense if no one wants what the IP right covers or if there is a ready supply of satisfactory alternatives for it. While IP rights do confer a sort of conceptual or nominal monopoly, the same could be said of private property generally, if not all legal rights, which it usually is not.²¹⁵ This linguistic difference appears to trace at least in part to the view that information goods differ in their capacity for being shared from the physical objects and physical space.²¹⁶

The rhetoric of monopoly has a number of potential effects, some general and atmospheric and some more strictly doctrinal.²¹⁷ One important example of the latter in the constitutional context involves the so-called “public rights doctrine,” which permits resolution of certain kinds of individual legal claims outside federal courts governed by Article III.²¹⁸ The America Invents Act, enacted in 2011, introduced the most substantial changes to U.S. patent law in at least half a century, which included the creation of new mechanisms to challenge issued patents in adversarial proceedings at the U.S. Patent and Trademark Office.²¹⁹ The Supreme Court upheld these adjudicative procedures against a separation-of-powers challenge, relying on the public rights doctrine.²²⁰ The Court reasoned that patents are property only in the

213 See, e.g., *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) (“The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special private benefit. Rather, the limited grant is a means by which an important public purpose may be achieved.”); see also MICHELE BOLDRIN & DAVID K. LEVINE, *AGAINST INTELLECTUAL MONOPOLY* 3, 7 (2008).

214 See Easterbrook, *supra* note 30, at 113, 118; Kitch, *supra* note 30, at 33.

215 See Edmund W. Kitch, *Elementary and Persistent Errors in the Economic Analysis of Intellectual Property*, 53 *VAND. L. REV.* 1727, 1729–30 (2000). But see Eric A. Posner & E. Glen Weyl, *Property Is Only Another Name for Monopoly*, 9 *J. LEGAL ANALYSIS* 51 (2017).

216 See, e.g., Lawrence Lessig, Lecture, *The Architecture of Innovation*, 51 *DUKE L.J.* 1783, 1798 (2002).

217 See Giles S. Rich, *Are Letters Patent Grants of Monopoly?*, 15 *W. NEW ENG. L. REV.* 239, 240 (1993) (“The tendency is to call a patent a ‘monopoly’ when it is to be invalidated or restricted and to say it is not a monopoly when it is to be held valid and infringed.”).

218 See *Stern v. Marshall*, 564 U.S. 462, 485 (2011); *Murray’s Lessee v. Hoboken Land & Improvement Co.*, 59 U.S. (18 How.) 272, 284 (1856).

219 Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

220 *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365 (2018).

limited sense that public franchises are property²²¹ and administrative reconsideration of granted patents protects “the public’s paramount interest in seeing that patent monopolies are kept within their legitimate scope.”²²² It remains to be seen what the full impact of this ruling will be on other aspects of patent law, but the willingness to equate patents with monopolies—and the impact of ideas about nonrivalry on that willingness—will likely shape those developments.

3. Matters of Interpretation

Reconsidering notions about nonrivalry has implications for a number of significant interpretive questions, within both IP and IP-adjacent areas of law. For example, the price discrimination prohibitions of the Robinson-Patman Act²²³ have been held inapplicable to the credit reporting industry partly on the theory that credit reports aren’t “goods” covered by the Act because credit information is nonrivalrous.²²⁴ The argument developed here is also of obvious relevance to the numerous areas of law that call for special treatment of “property”—including bankruptcy,²²⁵ tax,²²⁶ and criminal law,²²⁷ to say nothing of constitutional property protections.²²⁸ In addition, it may shed light on the interplay between intellectual property rights and the First Amendment. Numerous academic commentators have suggested that copyright and similar forms of IP protection may run afoul of First Amendment free speech protections, but courts have generally failed to follow suit, in large part, it seems, because of the “powerful intuition” that “[c]opyrighted works are private property.”²²⁹ The notion of a property-based exemption from First Amendment scrutiny has been repeatedly challenged on the ground that information goods are

221 A public franchise is a “privilege conferred by the government on an individual or a corporation to do that which does not belong to the citizens of the country generally by common right.” 36 AM. JUR. 2D *Franchises from Public Entities* § 1 (2023). Exclusive franchises are disfavored. See *Charles River Bridge v. Warren Bridge*, 36 U.S. (11 Pet.) 420 (1837).

222 *Oil States Energy*, 138 S. Ct. at 1374, 1374–75 (quoting *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144 (2016)).

223 See Robinson-Patman Act, 15 U.S.C. §§ 13–13b, 21a (2018).

224 See *Standfacts Credit Servs., Inc. v. Experian Info. Sols., Inc.*, 405 F. Supp. 2d 1141, 1159 (C.D. Cal. 2005).

225 See, e.g., 11 U.S.C. § 541 (2018).

226 See, e.g., 26 U.S.C. §§ 64, 6321 (2018).

227 See, e.g., Hobbs Act, 18 U.S.C. § 1951(b)(2) (2018); *Sekhar v. United States*, 570 U.S. 729, 732–37 (2013).

228 See generally Thomas W. Merrill, *The Landscape of Constitutional Property*, 86 VA. L. REV. 885 (2000).

229 Jed Rubenfeld, *The Freedom of Imagination: Copyright’s Constitutionality*, 112 YALE L.J. 1, 24 (2002).

nonrivalrous,²³⁰ and the argument presented here helps explain why that argument has not been more successful.

Perhaps most significantly, recognizing the shortcomings of the nonrivalry story raises a number of thorny issues involving Congress's constitutional patent and copyright authority. The Constitution grants Congress the power to "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."²³¹ It is commonly assumed that this provision allows Congress to establish patent and copyright protection only as a form of incentive—an assumption that is easy to accept when one believes this is the only function exclusive rights really could perform.²³² The possibility of conflicting preferences regarding the use of information goods, however, puts pressure on this understanding. Even assuming the IP Clause embodies a purely utilitarian perspective, it is no longer self-evident that IP rights can only be justified in terms of incentives. Does the possibility that IP rights might conceivably promote static efficiency, quite apart from any incentive effects, alter our understanding of what counts as the "promotion of progress" or the meaning of "limited times"?²³³ The nonrivalry story is a comfortable one because it simplifies the analysis, but reality is more complicated, and acknowledging its complexities will necessarily result in disruption.

CONCLUSION

Intellectual property law is big business but academic understanding of information, to say nothing of its legal treatment, remains very much in flux.²³⁴ Information differs from physical goods in any number of ways, but the extent and implications of those differences can easily be misunderstood. Perhaps it should not be entirely surprising, therefore, that the reality of intellectual property law on the ground

230 See, e.g., Baker, *supra* note 18, at 907; Christina Bohannon, *Copyright Infringement and Harmless Speech*, 61 HASTINGS L.J. 1083, 1123–24 (2010); Matthew D. Bunker, *Adventures in the Copyright Zone: The Puzzling Absence of Independent First Amendment Defenses in Contemporary Copyright Disputes*, 14 COMM'N L. & POL'Y 273, 276 (2009); Lemley & Volokh, *supra* note 192, at 184.

231 U.S. CONST. art. I, § 8, cl. 8.

232 See, e.g., *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) (quoting *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 158 (1948)).

233 Cf. Dotan Oliar, *Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress's Intellectual Property Power*, 94 GEO. L.J. 1771, 1836 (2006) (re-marking that "[i]t would not be straightforward, and it would perhaps even be difficult, for courts to determine which grants of intellectual property rights 'promote[] progress'" (second alteration in original)).

234 See Wu, *supra* note 170, at 1.

departs from the dominant theoretical constructs, leading to a persistent attitude of frustration within the academic commentary. Though intellectual property scholarship is varied and often highly sophisticated, the shared premises that unite virtually all writing on the subject push commentators to look at intellectual property from a certain stance that artificially narrows the functions available to intellectual property law. It is possible that the gap between theory and practice might be nothing more than the result of political opportunism or careless thinking, as critics sometimes intimate, but it is also possible that practitioners and lawmakers instinctively perceive something about information goods that received theory obscures.

It is plainly true that information goods can often be copied and shared relatively easily, enabling multiple uses by multiple people. But the conclusion that this removes information goods from the conceptual realm of property law does not follow. Property law is about resource conflicts, and resource conflicts do not arise solely from the incompatibility of multiple active uses. No less than with physical objects, information goods beget conflict whenever one person wants to use a good and someone else wants that person not to do so. The assertion that information goods are nonrivalrous implies that one person's use of such a good causes no injury to any other, but this cannot reflexively be assumed. Ignoring these possible costs to others risks distorting our understanding of how intellectual property law operates, chiefly by concealing from view the very problems that intellectual property law is positioned to resolve. In the end, the conclusion that information goods are nonrivalrous seems less a matter of empirical description than a statement of policy—a fact that is true, if it is true, because intellectual property law stipulates it to be so, not because it must be. Economic language and terminology can sharpen our analysis, but unless we are careful, they can also lend a kind of formalized authority that misleads as much as it illuminates. Too often, pronouncements about nonrivalry in intellectual property law have done just that.