

10-2013

Intellectual Property Defenses

Alex Stein

Brooklyn Law School

Gideon Parchomovsky

Follow this and additional works at: <https://brooklynworks.brooklaw.edu/faculty>



Part of the [Intellectual Property Law Commons](#)

Recommended Citation

113 Colum. L. Rev. 1483 (2013)

This Article is brought to you for free and open access by BrooklynWorks. It has been accepted for inclusion in Faculty Scholarship by an authorized administrator of BrooklynWorks.

INTELLECTUAL PROPERTY DEFENSES

Gideon Parchomovsky* & Alex Stein**

This Article demonstrates that all intellectual property defenses fit into three conceptual categories: general, individualized, and class defenses. A general defense challenges the validity of the plaintiff's intellectual property right. When raised successfully, it annuls the plaintiff's right and relieves not only the defendant, but also the entire world, of the duty to comply with it. An individualized defense is much narrower in scope: Its successful showing defeats the specific infringement claim asserted by the plaintiff, but leaves the plaintiff's right intact. Class defenses form an in-between category: They create an immunity zone for a certain group of users to which the defendant belongs, without nullifying the plaintiff's right.

The Article then shows that society has a special interest in the successful raising of class and general defenses. These defenses eliminate the unneeded intellectual property protection and thereby facilitate innovation, creativity, and competition. However, because defendants do not capture the full social benefit associated with class and general defenses, their investment in such defenses falls below the socially optimal level.

To remedy this problem, the Article proposes that defendants who raise class or general defenses be allowed to implead other potential defendants. To this end, it develops two mechanisms: "preclusion" and "restitution." Both mechanisms permit impleaded parties to decline the invitation to join, but attach a consequence to the refusal. Under the preclusion mechanism, parties who choose to opt out would be barred from raising any general or class defense that was unsuccessfully asserted by the original defendant, if sued by the same plaintiff. The restitution mechanism imposes no procedural bars on the parties selecting to opt out. Instead, it requires them to pay the defendant a fair share of her litigation costs should she prevail on a class or general defense as they, too, benefit from her effort. The Article ultimately endorses the restitution mechanism.

* Robert G. Fuller, Jr. Professor of Law, University of Pennsylvania Law School & Professor of Law, Bar Ilan University School of Law, Israel.

** Professor of Law, Benjamin N. Cardozo School of Law, Yeshiva University. We thank Michael Abramowicz, Shyam Balganesi, Avi Bell, Rick Bierschbach, Miriam Bitton, Victor Bouganin, Mike Burstein, Roger Ford, Brett Frischmann, John Golden, Alexi Lahav, Mark Lemley, Robert Merges, Ariel Porat, Alex Reinert, Peter Siegelman, and participants in workshops at Penn Law School and Sha'arei Mishpat College of Legal Studies, Israel, for useful comments and suggestions. We are especially indebted to Chagai Vinizky for his invaluable contribution to a previous draft. Finally, we are grateful to Levi Morris for outstanding research assistance.

INTRODUCTION	1484
I. MAPPING INTELLECTUAL PROPERTY DEFENSES	1491
A. Copyright Law	1493
B. Patent Law	1498
C. Trademarks	1503
D. Trade Secrets	1508
E. Summary	1511
II. THE SPECIAL CASE OF CLASS AND GENERAL DEFENSES	1512
III. PROCEDURE AND SUBSTANCE IN INTELLECTUAL PROPERTY	
DEFENSES	1520
A. Preclusion	1525
B. Restitution	1526
C. The Effect of the Proposed Reform on Out-of-Court Settlements	1528
IV. OBJECTIONS	1530
A. Imbalance of Powers	1531
B. The Precedent Formation Analogy	1532
C. Defendants' Conflicts of Interest	1534
CONCLUSION	1534

INTRODUCTION

This Article devises a meta-theory of defenses in intellectual property law. A meta-theory is important not only to legal theorists, but, first and foremost, to lawmakers. As will be shown in the pages ahead, different intellectual property defenses have radically different impacts on owners and users of intellectual assets. Legislators must be mindful of this fact when enacting new defenses and determining the conditions for raising them. Courts, for their part, must also be aware of the commonalities and differences among various defenses in interpreting them and determining their applicability and scope in individual cases.

This Article posits that all intellectual property defenses fall into three categories: general defenses, individualized defenses, and class defenses. General defenses challenge the very essence of the plaintiff's right. Examples include merger of idea and expression in copyright law,¹ obviousness in patent law,² and genericide in trademark law.³ A general defense, when raised successfully, has implications that go well beyond the case at hand. A successful general defense decides not only the fate of the individual defendant who raised it, but also the rights and obligations of multiple potential defendants who could be sued by the

1. See *infra* Part I.A (enumerating and categorizing copyright defenses).

2. See *infra* Part I.B (categorizing patent law defenses).

3. See *infra* Part I.C (discussing trademark claims and defenses).

plaintiff in the future. Conceptually, a general defense is the inverse of a right in rem. A right in rem is a right that avails against the rest of the world, whereas a general defense negates the right vis-à-vis the rest of the world, leaving the plaintiff empty-handed.⁴

The effect of individualized defenses, by contrast, is limited to the case at bar. An individualized defense creates a limited immunity zone for the individual defendant who raises it successfully, while leaving the plaintiff's entitlement against the rest of the world intact.⁵ An individualized defense helps only the defendant sued for a violation of the plaintiff's right. Absence of consumer confusion under trademark law, independent creation or lack of substantial similarity in copyright law, and a claim that a later invention does not come within the claims of an earlier patent are all examples of individualized defenses. A successful showing of an individualized defense helps the defendant defeat the suit against her, but does not nullify the plaintiff's entitlement. Hence, even after the loss, the plaintiff will be able to assert his right against other individuals and corporations. Conceptually, therefore, individualized defenses may be thought of as the inverse of in personam rights, rights that avail only against a particular individual.⁶

4. As rights in rem, intellectual property rights are rights that avail against the rest of the world. See Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 Yale L.J. 710, 718–20 (1917) (defining right in rem as “availing respectively against persons constituting a very large and indefinite class of people” (emphasis omitted)). A defendant who successfully challenges an intellectual property right by establishing a general defense removes the compliance burden not only from herself, but also from all other members of our society. For the procedural side of this principle, see *In re Cygnus Telecomms. Tech., LLC, Patent Litig.*, 536 F.3d 1343, 1349 (Fed. Cir. 2008) (“It is a firmly established principle that a judgment of a patent invalidity in one case can collaterally estop the patent owner from contesting invalidity in a subsequent case, as long as the patent owner had a ‘full and fair opportunity to litigate the validity of the patent’” (quoting *Miss. Chem. Corp. v. Swift Agric. Chems. Corp.*, 717 F.2d 1374, 1379 (Fed. Cir. 1983)) (citing *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 333 (1971))).

5. A court's analysis of an individualized defense can produce valuable information about the nature and boundaries of the plaintiff's right. For example, a court weighing the question of consumer confusion in a trademark infringement case may classify the plaintiff's mark as descriptive (with secondary meaning), suggestive, arbitrary, or fanciful. This information can be important for third parties, but it does not negate the plaintiff's right or relieve future defendants of the duty to respect it. For legal mechanisms that elicit this information, see generally Jeanne C. Fromer, *Claiming Intellectual Property*, 76 U. Chi. L. Rev. 719 (2009); Peter S. Menell, *Promoting Patent Claim Clarity* (UC Berkeley Pub. Law Research Paper No. 2171287, 2012), available at <http://ssrn.com/abstract=2171287> (on file with the *Columbia Law Review*). For analysis of patent and copyright rules as reducing observers' cost of verifying the underlying intellectual property rights, see Clarisa Long, *Information Costs in Patent and Copyright*, 90 Va. L. Rev. 465, 480 (2004); Clarisa Long, *Patent Signals*, 69 U. Chi. L. Rev. 625, 668–71 (2002).

6. See Hohfeld, *supra* note 4, at 718–20 (distinguishing between rights in rem and rights in personam).

There is also a third, smaller, in-between category: class defenses. Unlike general defenses that have the potential to negate the right asserted by the plaintiff, and individualized defenses that do not impact the plaintiff's right against any future defendants, class defenses, when successful, block claims against a specified class of defendants. Fair use, as applied to parodies under copyright law, is a paradigmatic example of a class defense. Fair use is often invoked as an individualized defense against a particular infringement claim. At other times, however, it sets up a categorical bar against certain infringement claims, thereby protecting a specified class of defendants. There is a shared understanding among copyright scholars and practitioners that fair use affords parodists a legal safe harbor. As a result, a defendant who successfully invokes a parody defense in a copyright infringement action shields future parodists against similar suits.⁷ Class defenses can be thought of as the conceptual mirror image of quasi-property rights. As the Supreme Court famously explained in *International News Service v. Associated Press*, quasi-property rights are rights that avail only against direct competitors.⁸ In a similar vein, class defenses protect the entire trade to which the defendant belongs—in this example, parodists.

The classification proposed herein highlights a critical difference between general defenses (and to a lesser degree, class defenses) and individualized defenses. The benefit of an individualized defense accrues exclusively to the defendant who raises it. In other words, the defendant's victory does not change the legal status of other potential defendants.⁹ The same is obviously true of the cost. Thus, in the case of individualized defenses, a defendant fully internalizes the cost and benefit of raising a particular defense. The case of general and class defenses is profoundly different. A defendant who successfully raises a general defense bestows a benefit on society at large by invalidating an intellectual property right that should not exist from a legal standpoint. For example, a defendant who shows that the plaintiff's work lacks the requisite level of

7. See *infra* notes 13–15, 49–52 and accompanying text (discussing parody defense cases). Another class defense is time shifting. This defense becomes available as part of the fair use doctrine when a noncommercial viewer of a broadcast television show records the show with her VCR to watch it later. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 447–56 (1984) (explaining noncommercial time shifting falls under fair use doctrine). By establishing this defense, the viewer makes it permissible for other noncommercial viewers—also identified as personal users—to copy the show. For a recent analysis of this defense, see Aaron Perzanowski & Jason Schultz, *Copyright Exhaustion and the Personal Use Dilemma*, 96 Minn. L. Rev. 2067, 2086–92 (2012).

8. 248 U.S. 215, 236 (1918). For an excellent analysis of the “quasi-property” concept and justification for its use in the *International News Service* decision, see Shyamkrishna Balganesh, “Hot News”: The Enduring Myth of Property in News, 111 Colum. L. Rev. 419, 429–38 (2011).

9. We acknowledge that individualized defenses can yield limited informational benefits to third parties, which stem from the fact that courts in assessing the merits of an individualized defense must often analyze the scope and nature of the plaintiff's intellectual property right.

originality and is therefore ineligible for copyright protection eliminates the threat of copyright liability not only for herself, but also for the rest of the world.¹⁰ In Hohfeldian terms, intellectual property rights are rights in rem that avail against the rest of the world.¹¹ And as Wesley Newcomb Hohfeld famously pointed out, these rights impose a duty of compliance on each member of society at large.¹² A defendant who successfully challenges an intellectual property right through a general defense therefore alleviates the burden of compliance not only from herself, but also from all other members of society. Removal of this burden opens up valuable economic opportunities for multiple creators.

For the same reason, a defendant who succeeds at establishing a class defense benefits an entire class of similarly situated defendants. In this case, the social benefits may be more limited in scope as they only accrue to a particular group of people. Yet here too there exists a substantial misalignment between the defendant's and other creators' benefits. Consider the case of *Campbell v. Acuff-Rose Music, Inc.*, which established the parody defense in our copyright law.¹³ There, the defendants alone shouldered the burden of litigating the case all the way to the Supreme Court and of persuading the Court to recognize the defense.¹⁴ Yet the benefit from the defendants' success accrued to all creators of parodies.¹⁵

From an economic perspective, general and class defenses create a positive spillover effect for society. And while society as a whole benefits from the defendant's litigation effort, the defendant alone bears the cost of vindicating the claims. Economic theory suggests that goods and services that give rise to such positive externalities will be underproduced in society.¹⁶ General and class defenses provide a perfect example.

To see why, imagine a defendant, Dale, who is sued for patent infringement by a large corporation. Dale is certain that the patent asserted against her is invalid for lack of novelty. After all, about 50% of all

10. This example draws on *Feist Publication, Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991), the Supreme Court's decision that the listings in the appellee's telephone directory failed to meet the requisite "originality" threshold and were therefore not entitled to copyright protection. As a result, beyond the appellant, every third party acquired the liberty to copy the listings in the appellee's directory.

11. See Hohfeld, *supra* note 4, at 718–20. In Hohfeldian terms, a right may avail against a large, indefinite group of individuals rather than the world at large and still be considered a right in rem.

12. *Id.*

13. 510 U.S. 569 (1994).

14. *Id.* at 572–74.

15. See *infra* notes 49–52 and accompanying text (discussing *Campbell v. Acuff-Rose Music* and case's impact on future parody claims).

16. See Gideon Parchomovsky & Peter Siegelman, *Cities, Property, and Positive Externalities*, 54 Wm. & Mary L. Rev. 211, 228–36 (2012) (explaining why economic efficiency goal calls for internalization of positive externalities).

patents are invalidated by courts.¹⁷ However, to prove her claim in court would cost her \$500,000 while she can settle the case out of court for \$100,000. Should Dale choose to litigate, she may spare multiple other defendants from facing her dilemma. The aggregate benefit to those parties may be in the millions of dollars. Yet, if Dale is a rational self-interest maximizer, she will choose to settle the case and pay \$100,000 to the holder of the invalid patent. The large benefit to other potential defendants and their innovative technological pursuits will not be part of her calculus.

At this point, one might interject and argue that when a patent holder chooses to litigate, he runs the risk of losing his intellectual asset and hence there is symmetry between the plaintiff's and the defendant's bargaining positions. This symmetry, so goes the argument, will motivate the parties to settle the lawsuit for its expected value (or a close amount).¹⁸ The symmetry is illusory, though. The rightsholder is endowed with the power to decide against whom to enforce his right. Furthermore, he can discontinue the litigation process at almost any point. In short, in our legal system plaintiffs enjoy an inherent first-mover advantage. As a result, plaintiffs can target defendants that do not have the financial wherewithal to face them in court, or worse, defendants who cannot afford the high cost of litigation and would fold in court. Doing so allows plaintiffs to secure favorable results in litigation that facilitate subsequent enforcement efforts.¹⁹ A patent, a copyright, or a trademark that was "upheld" in litigation can be then asserted against other users with more gusto.²⁰ If, for some reason, a plaintiff errs in his assess-

17. See John R. Allison, Mark A. Lemley & Joshua Walker, Patent Quality and Settlement Among Repeat Patent Litigants, 99 *Geo. L.J.* 677, 680 (2011) ("Once-litigated patents win in court almost 50% of the time, while the most-litigated—and putatively most valuable—patents win in court only 10.7% of the time."); Carl Shapiro, Patent System Reform: Economic Analysis and Critique, 19 *Berkeley Tech. L.J.* 1017, 1028 (2004) ("[T]he probability that a patent will hold up under court challenge has risen over time, reaching just over 50 percent in the more recent period" (citing *Nat'l Acad. of Scis., A Patent System for the 21st Century* 48–49 (Stephen A. Merrill et al. eds., 2004))).

18. Cf. Anup Malani & Jonathan S. Masur, Raising the Stakes in Patent Cases, 101 *Geo. L.J.* 637, 650 (2013) (explaining when valid patent owners are forced into court, "[n]ot only are the costs of litigation and the risks of improper invalidation significant; they can also exert a differential impact on some of the most important and vulnerable patent holders").

19. See, e.g., Michael J. Meurer, Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation, 44 *B.C. L. Rev.* 509, 521–25 (2003) (describing exclusionary litigation and predatory litigation as strategies employed by plaintiffs seeking favorable results); see also Gideon Parchomovsky & Alex Stein, The Relational Contingency of Rights, 98 *Va. L. Rev.* 1313, 1345–52 (2012) [hereinafter Parchomovsky & Stein, *Relational Contingency*] (explaining how large firms with economies of scale and discounted litigation expenditures can exploit their superiority and have upper hand in both trial and settlement against defendants with no economies of scale who must pay more for legal representation).

20. Plaintiffs' tendency to overvalue their intellectual property will often strengthen their incentive to sue. See Christopher Buccafusco & Christopher Jon Sprigman, The

ment of a potential defendant who turns out to be more financially capable or principled than the plaintiff estimated, the plaintiff can always drop the case and target another user.

Contemporary research, both empirical and theoretical,²¹ has demonstrated that problematic abuse of intellectual property rights looms large and is becoming increasingly acute.²² Against this backdrop comes the normative contribution of this Article. The Article proposes two innovative mechanisms designed to increase the power of defendants who wish to raise general or class defenses. We argue that the law should endow defendants who raise a general or class defense with the power to implead as codefendants other similarly situated parties. This power would enable critical cost sharing among defendants, with each party shouldering a relatively small fraction of the aggregate cost of establishing the defense.

The rationale behind this proposal is straightforward. All potential defendants face the risk of being sued by intellectual property holders. The order in which they may be sued is not known to them *ex ante* and depends entirely on the plaintiff's strategic selection. An individual defendant would typically be unable to fend off the litigation threat singlehandedly. As explained, a plaintiff can adopt a clever "divide and conquer" strategy and defeat the chosen defendants one by one. Together, the potential defendants may stand a good chance of prevailing in the litigation. However, they face a collective action problem: Each defendant prefers that someone other than himself bear the high cost of waging full legal battle against the plaintiff. This Article's proposals mitigate this problem by allowing each defendant to consolidate the pool of potential defendants and mount a strong legal defense collectively.

Specifically, the Article develops two innovative alternatives to advance the voluntary joinder of defendants: (1) the preclusion mechanism and (2) the restitution mechanism. Under the preclusion mechanism, each defendant who raises a general or class defense would be given the power to implead similarly situated defendants: those who are, or might be, accused of infringing the underlying intellectual property entitlement. The impleaded defendants would be able to opt out instead of joining in, but if the class or general defense asserted by the actual defendant fails, they would be precluded from asserting that defense in their future litigation against the same plaintiff. The proposed

Creativity Effect, 78 U. Chi. L. Rev. 31, 36–41 (2011) (demonstrating through experiment that owners tend to put excessive value on their intellectual property assets).

21. See, e.g., Tom Ewing & Robin Feldman, *The Giants Among Us*, Stan. Tech. L. Rev., Jan. 9, 2012, at 1, 23–25, <http://stlr.stanford.edu/pdf/feldman-giants-among-us.pdf> (on file with the *Columbia Law Review*) (documenting and analyzing strategic abuse of patent rights by mass aggregators of patents).

22. See Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1349–50, and sources cited therein.

procedural bar would incentivize impleaded defendants to join the initial defendant and face the infringement suit together.

Alternatively, we consider the adoption of a restitution-based mechanism. Under this mechanism, impleaded parties would be at liberty not to join the litigation. However, in the event the defendant's class or general defense is successful, parties who opted out of the litigation would have to pay their fair share of the cost of raising the defense as they, too, benefited from the effort. In the case of failure, the parties who opted out would have to pay nothing. After a careful weighing of the pros and cons of each alternative in Part III, we emerge with a slight preference for the restitution mechanism.

To illustrate how the proposed mechanisms would work, assume that Motorola sues a small manufacturer of cellphone equipment for a patent and trade-dress infringement. The small manufacturer has a promising general defense against the suit. Under extant law, however, she is left to her own devices. Under our proposal, she would be able to invite other cellphone manufacturers, including Apple, Nokia, and Samsung, to join the suit as defendants. The invited parties would be at liberty to decline the invitation. However, they would be subject to the proposed preclusion and restitution mechanisms. Under the preclusion mechanism, parties who declined the invitation to join as codefendants would be barred from relitigating the class and general defenses raised by the small manufacturer. Under the restitution mechanism, if the manufacturer prevailed on a class or general defense, she would be entitled to collect from those parties who passed up the invitation to be codefendants a prorated share of her expenses plus a premium representing the risk she bore on their behalf.²³

By changing the payoff matrix that is currently associated with litigation and enhancing the attractiveness of cooperation relative to defection,²⁴ these two mechanisms go a long way toward countering the inherent advantage enjoyed by plaintiffs and leveling the litigation playfield.

It is important to understand that the adoption of this Article's proposals would affect not only the way cases proceed in court, but also, and more pervasively, the rightsholders' decisions to file suits and otherwise enforce their entitlements. This proposal would eliminate many of the strike suits that are currently initiated by plaintiffs who take advantage of asymmetrical litigation costs.²⁵ Lowering the threat of strike suits would lead to wider use of technologies and expressive works and,

23. For a detailed account of the restitution proposal, see *infra* Part III.B.

24. For "cooperation/defection" taxonomy, see Robert Axelrod, *The Evolution of Cooperation* 7–8 (rev. ed. 2006).

25. Cf. Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 *Berkeley Tech. L.J.* 519, 556 (1999) (describing "strike suit" phenomenon in copyright).

as importantly, would reduce the drag of intellectual property rights on future innovation and expression.²⁶

Structurally, this Article proceeds as follows. Part I develops a new taxonomy of intellectual property defenses organized around the categories of general, individualized, and class defenses. In this Part, we set forth the defining characteristics of each category and devise a comprehensive mapping of all intellectual property defenses. Part II addresses the special challenge presented by general and class defenses by analyzing them through the lens of the economic theory of positive externalities. Furthermore, this Part discusses the cost to society from “underproduction” of class and especially general defenses. Part III introduces two novel procedural mechanisms designed to encourage defendants to raise and litigate general and class defenses. These mechanisms will give defendants sued for violations of intellectual property rights the power to implead potential future defendants and thus spread the cost of defense over multiple actors. As shown herein, this proposal enjoys the twin advantages of simplicity and practical implementability. Part IV raises and responds to possible objections to this proposal. A short Conclusion ensues.

I. MAPPING INTELLECTUAL PROPERTY DEFENSES

In this Part, we set out to map the terrain of intellectual property defenses. We demonstrate that all defenses to intellectual property infringement claims may be divided into three broad types: individualized defenses, class defenses, and general defenses. All three types can be used to defeat infringement claims. Critically, though, they vary in their effect on third parties. Individualized defenses have a minimal or no effect on third parties. A defendant who successfully asserts an individualized defense—say, independent creation in a copyright infringement suit—bestows no real benefit, in terms of legal rights or privileges, on other users of the copyrighted work. The plaintiff can continue to assert her copyright against third parties and file lawsuits against them in appropriate cases. The defendant’s victory does not narrow the scope of her right and, clearly, does not erase it. To be sure, individualized defenses may—and do—generate information spillovers for third parties.²⁷ For example, if a defendant in a patent infringement suit claims that she did not infringe any of the patentee’s claims, the court would have to construct the claims invoked by the patentee in order to evaluate

26. See *infra* notes 172–174 and accompanying text (showing defendants in intellectual property disputes generally have little incentive to litigate due to asymmetric costs).

27. Cf. Ehud Kamar, *A Regulatory Competition Theory of Indeterminacy in Corporate Law*, 98 *Colum. L. Rev.* 1908, 1927–39 (1998) (arguing Delaware Chancery Court produces beneficial interpretive externalities for firms choosing to incorporate in Delaware and be governed by Delaware’s corporate law).

the defense. The construction of the claims may, no doubt, prove valuable for third parties, as it clarifies the boundaries of the patent. But it does not change the legal status of third parties vis-à-vis the patent holder. For these third parties, the impact of the court's decision is more information, not more rights.

The effect of class defenses is different. A successful class defense changes the legal status not only of the defendant who raised it, but also of similarly situated individuals or firms. Consider, for example, a defendant in a trade secrecy infringement case who argues that the information the employer-plaintiff claims as a trade secret falls in the category of unprotected "general skills."²⁸ If successful, this defendant would help not only herself, but also an entire class of employees that could have been sued on the same grounds in the future. By having the "general skills" defense upheld by the court, the defendant unlocks gainful opportunities for all of those employees. Or consider a defendant in a trademark infringement case who proves that the plaintiff's mark is descriptive and has not yet acquired secondary meaning.²⁹ Here, too, a benefit accrues to a whole class of businesses that use a mark that is similar to that of the plaintiff and, owing to the defendant's success, will be able to continue to use their marks.

General defenses change the status of intellectual property holders vis-à-vis the entire world. These defenses affect the very existence of the right asserted in a particular case. Thus, when a general defense is asserted successfully, it means that the intellectual property right with respect to which it was raised ceases to exist. To illustrate this effect, consider a defendant in a patent infringement case who demonstrates that an invention is obvious to a person skilled in the relevant art, or a defendant in a copyright infringement case who argues that an expressive work is not original. In both cases, the defendant's victory extinguishes the plaintiff's legal asset: the intellectual property right on which the case was predicated. And since intellectual property rights avail against the rest of the world, the meaning of that victory is that the rest of the world is now relieved of the legal duty to respect the plaintiff's patent or copyright. The defendant's victory affects not only those individuals who otherwise may have been sued by the plaintiff for acts they have committed in the past, but also multiple future actors.

The proceeding discussion will apply the new taxonomy of defenses across all areas of intellectual property. We will partition the entire universe of intellectual property defenses into the categories of indi-

28. See *infra* notes 151-152 and accompanying text (showing employees are permitted to transfer general skills and knowledge from one job to another).

29. See *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 851 n.11 (1982) ("To establish secondary meaning, a manufacturer must show that, in the minds of the public, the primary significance of a product feature or term is to identify the source of the product rather than the product itself.").

vidualized, class, and general defenses. We begin our conceptual foray with the defenses available under copyright law. Subsequently, we move to discuss defenses in patent law, and then proceed to trademark law. We conclude with trade secrecy defenses.

A. Copyright Law

Individualized defenses in copyright law include independent creation,³⁰ copying of unprotected elements,³¹ lack of substantial similarity,³² and, in some cases, fair use.³³ Each of these defenses relieves a defendant from liability for copyright infringement without affecting the legal status of third parties. The independent creation defense provides a helpful illustration. In contrast to patent law, where similarity alone is the touchstone of liability,³⁴ copyright law also requires unlawful copying.³⁵

30. See Robert P. Merges et al., *Intellectual Property in the New Technological Age* 439 (6th ed. 2012) [hereinafter Merges et al., *Intellectual Property*] (outlining scope of independent creation defense).

31. See, e.g., *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir. 1994) (“[T]he party claiming infringement may place ‘no reliance upon any similarity in expression resulting from’ unprotectable elements.” (emphasis added by *Apple Computer*) (quoting *Aliotti v. R. Dakin & Co.*, 831 F.2d 898, 901 (9th Cir. 1987))); *Alexander v. Haley*, 460 F. Supp. 40, 46 (S.D.N.Y. 1978) (finding no substantial similarity between protectable, as opposed to unprotectable, elements of plaintiff’s novel and defendant’s book); see also Gideon Parchomovsky & Alex Stein, *Originality*, 95 Va. L. Rev. 1505, 1514 (2009) [hereinafter Parchomovsky & Stein, *Originality*] (explaining plaintiff in copyright infringement suit must prove “defendant borrowed protected elements from her work” and this proof “is necessary to ensure that the similarity between the two works is not due to the presence of the same *unprotected elements* in both works”).

32. See David Nimmer, *An Odyssey Through Copyright’s Vicarious Defenses*, 73 N.Y.U. L. Rev. 162, 175 (1998) (calling “lack of substantial similarity” a classic defense in copyright suits); Parchomovsky & Stein, *Originality*, supra note 31, at 1513 (attesting lack of similarity between protected and unprotected works dooms copyright owner’s suit).

33. See Merges et al., *Intellectual Property*, supra note 30, at 609–10, 618–22 (outlining scope of fair use defense).

34. Patent infringement includes any development of a product or technological process during the term of the patent that falls within the scope of the patent’s claims. See, e.g., *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 374 (1996) (explaining patent infringements “rest on allegations that the defendant ‘without authority ma[de], use[d] or [sold the] patented invention, within the United States during the term of the patent therefor’” (citing 35 U.S.C. § 271(a) (1994))). Compare *Samson Vermont, Independent Invention as a Defense to Patent Infringement*, 105 Mich. L. Rev. 475, 484–87 (2006) (arguing patent infringement should incorporate proof of copying from patent holder), with *Mark A. Lemley, Should Patent Infringement Require Proof of Copying?*, 105 Mich. L. Rev. 1525, 1529 (2007) (arguing, inter alia, that recognition of independent invention defense, advocated by Vermont, would chill expensive research and development by reducing entrepreneurs’ probability of recouping their investment).

35. See *Arnstein v. Porter*, 154 F.2d 464 (2d Cir. 1946) (setting forth classic formulation of two-step analysis, which considers both copying and unlawful appropriation); Parchomovsky & Stein, *Originality*, supra note 31, at 1513–14 (“To succeed in an infringement suit, a plaintiff needs to show copying and improper appropriation by the defendant.”).

If, perchance, a person independently creates a work that is identical to a preexisting work, she will not be liable for copyright infringement.³⁶ Rather, both works would be entitled to copyright protection. The independent creation defense helps the individual defendant who raises it, but has no effect whatsoever on the rights and powers of the copyright holder vis-à-vis third parties. Moreover, it does not create information spillovers for third parties.

Another important copyright doctrine that falls in the category of individualized defenses is the idea-expression dichotomy. As section 102(a) of the Copyright Act makes clear, copyright protection extends to the original expression of the plaintiff as it was fixed in a tangible medium of expression, but not to the ideas underlying the expression.³⁷ The idea-expression divide has a venerable history,³⁸ and it continues to be a ground principle of our copyright system. Under this principle, only appropriation of protected expression is actionable; ideas remain free for the taking. Hence, a defendant can fend off a copyright infringement case by showing that all she copied were unprotected ideas.³⁹ Doing so will help the defendant prevail against the plaintiff, and may even generate valuable information for future litigants. However, it will not bar the copyright owner from instituting legal actions against other individuals who use his work. These users would then have to establish their own defenses—individualized, class, or general.

Ideas are by no means the only elements that can be taken with impunity. Other unprotected elements that can be used freely by third parties include facts,⁴⁰ public domain materials,⁴¹ and “scenes a faire.”⁴² Facts are treated similarly to ideas and hence their appropriation does not trigger liability under our copyright system. Courts have consistently ruled that facts and historical research can be taken by others. Hence, if

36. See, e.g., *Selle v. Gibb*, 741 F.2d 896, 901 (7th Cir. 1984) (“Proof of copying is crucial to any claim of copyright infringement because no matter how similar the two works may be (even to the point of identity), if the defendant did not copy the accused work, there is no infringement.”).

37. 17 U.S.C. § 102(a) (2012); see also § 102(b) (“In no case does copyright protection extend to any idea . . . regardless of the form in which it is described . . . in such work.”).

38. See, e.g., *Baker v. Selden*, 101 U.S. 99, 101–02 (1879) (establishing idea-expression dichotomy).

39. *Id.* at 102 (“[T]here is a clear distinction between the book, as such, and the art which it is intended to illustrate. . . . [N]o one would contend that the copyright of the treatise would give the exclusive right to the art or manufacture described therein.”).

40. See, e.g., *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 356 (1991) (holding while facts are not copyrightable per se, compilations of facts may be).

41. See Edward Samuels, *The Public Domain in Copyright Law*, 41 J. Copyright Soc'y U.S.A. 137, 151–54 (1993) (discussing how copyrighted material enters public domain through expiration or forfeiture of copyright).

42. See, e.g., Leslie A. Kurtz, *Copyright: The Scenes a Faire Doctrine*, 41 Fla. L. Rev. 79, 86–96 (1989) (arguing “scenes a faire” have traditionally been impossible to protect).

a defendant can demonstrate that she took only facts and historical research, she will be sheltered from liability.⁴³ The “scenes a faire” defense denies protection to stock elements, such as yellow taxi cabs in a novel that takes place in New York City or bay views in a film about a love affair in San Francisco. Naturally, copyright protection does not extend to public domain materials that may be used freely. Oftentimes, the use of facts, “scenes a faire,” or public domain materials may result in similarity between the plaintiff’s and the defendant’s works. Copyright holders use the similarity between the works to construct a *prima facie* case against defendants. Similarity between the copyrighted work and the allegedly infringing creation constitutes *prima facie* evidence of infringement. However, courts stop short of assigning liability when the similarity is due to the use of unprotected elements in both works. A ruling favoring the defendant in all those cases is both doctrinally correct and socially desirable, but it does not affect parties not participating in the litigation. Such outsiders can find valuable information in the court’s ruling—namely, information about the boundaries of the plaintiff’s right—but the ruling itself does not relieve them of the duty to respect the plaintiff’s right.

The fair use doctrine is yet another example of an individualized defense. Originating in equity, fair use is an affirmative defense against copyright infringement actions. In adjudicating fair use claims, courts are required to consider: (1) the purpose of the defendant’s use; (2) the nature of the plaintiff’s copyrighted work; (3) the amount and substantiality appropriated by the defendant in relation to the work as a whole; and (4) the effect of the unauthorized use on the market for the plaintiff’s work.⁴⁴ Ultimately, fair use remains “an equitable rule of reason”⁴⁵ and its application varies based on the particular facts of each individual case.⁴⁶ Accordingly, a successful showing of fair use allows the defendant to keep using the plaintiff’s protected expression without payment. However, in the typical case, the defendant’s success does not help other potential users of the copyrighted work. As one commentator noted, it is unlikely that “the results in concrete cases can be made predictably responsive to a limited set of definite principles—certainly not large, general principles and not very often even more specific, intermediate ones.”⁴⁷

43. See *Miller v. Universal City Studios, Inc.*, 650 F.2d 1365, 1370–71 (5th Cir. 1981) (explaining historical research and facts are not copyrightable); *Rosemont Enters., Inc. v. Random House, Inc.*, 366 F.2d 303, 309–10 (2d Cir. 1966) (same).

44. 17 U.S.C. § 107 (2012).

45. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 448 & n.31 (1984).

46. *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 552 (1985) (“[F]air use analysis must always be tailored to the individual case.”).

47. Lloyd L. Weinreb, *Fair’s Fair: A Comment on the Fair Use Doctrine*, 103 Harv. L. Rev. 1137, 1138 (1990).

Copyright law recognizes a number of class defenses as well. As we just noted, fair use is frequently asserted as an individualized defense, but in at least one context it constitutes a class defense under our taxonomy.⁴⁸ In *Campbell v. Acuff-Rose Music, Inc.*, the Supreme Court ruled that parodists have an especially strong claim for fair use.⁴⁹ Furthermore, the Court explained how the statutory factors should be weighed in parody cases. Lower courts endorsed the message and have applied the ruling consistently.⁵⁰ The result was the creation of a safe harbor for parodies.⁵¹ In our terminology, parodists, as a class, are virtually immune from copyright liability. The defendants in *Campbell* did not merely transform their own legal status into noninfringing. They did so for the entire class of parodists to which they belonged, bestowing a substantial economic benefit on all the other class members.⁵²

Another example of a class defense is the technological safe harbor established by the Supreme Court in *Sony Corp. of America v. Universal City Studios, Inc.*⁵³ In that landmark decision, the Supreme Court ruled that a technology provider does not assume derivative (or secondary) liability for infringements committed by users of the technology—in that case, a video cassette recorder—when the technology is “capable of substantial noninfringing use.”⁵⁴ The decision constituted a victory not only for Sony, the actual defendant, but also for the entire technological sector. It

48. Professor Jason Mazzone recently proposed the establishment of a new agency for protecting fair use. See Jason Mazzone, *Copyfraud and Other Abuses of Intellectual Property Law* 189–92 (2011). Adoption of this proposal would likely lead to a recharacterization of fair use into a class, or even general, defense. This proposal, however, engenders a twin problem of agency capture and costly bureaucracy. For discussion of this problem, see Pamela Samuelson, *Is Copyright Reform Possible?*, 126 Harv. L. Rev. 740, 763 (2013) (reviewing Mazzone, *supra*).

49. 510 U.S. 569, 588 (1994).

50. See, e.g., *Cardtoons, L.C. v. Major League Baseball Players Ass’n*, 335 F.3d 1161, 1165 (10th Cir. 2003) (attesting parody generally constitutes fair use after *Campbell*, 510 U.S. 569); *Ty, Inc. v. Publ’ns Int’l Ltd.*, 292 F.3d 512, 518 (7th Cir. 2002) (same); *Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257, 1268–69 (11th Cir. 2001) (same).

51. See Gideon Parchomovsky & Kevin A. Goldman, *Fair Use Harbors*, 93 Va. L. Rev. 1483, 1526 (2007) (discussing parodies’ relative immunity from liability).

52. For other potential applications of fair use as a class defense, see Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* 389 (2006) (arguing investigative journalists can claim fair use when publishing materials not intended for sale that carry high public value); Rebecca Tushnet, *Worth a Thousand Words: The Images of Copyright*, 125 Harv. L. Rev. 683, 754 (2012) (attesting Copyright Office recently recognized video remix as fair use after accepting artists’ position that “high-quality reproductions are often necessary to make critical points”). For a powerful normative claim in that direction, see Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* 294–96 (2004).

53. 464 U.S. 417 (1984).

54. *Id.* at 442.

had a profound effect on all producers of video recorders,⁵⁵ as well as on numerous manufacturers of other technological devices.⁵⁶

Finally, copyright law contains several general defenses as well. Consider the merger doctrine that applies in cases in which there is only a limited number of ways to express an idea.⁵⁷ In such cases, by the doctrine's operation, the expressions merge with the idea and copyright protection is withheld altogether.⁵⁸ A defendant who successfully raises a merger defense consequently helps not only herself, but also the public as a whole. The merger defense targets the very existence of the plaintiff's copyright. Hence, when a court finds for the defendant on merger grounds, the plaintiff loses not only the case, but also the very right he asserted.

A similar result is obtained when a defendant, in response to an infringement suit, successfully argues that the plaintiff's copyright should not have existed ab initio as his work lacks the requisite level of originality or a modicum of creativity. Indeed, "[o]riginality is the sine qua non of copyright protection."⁵⁹ The Copyright Act makes it clear that protection is reserved only for original works of authorship.⁶⁰

55. See Jennifer 8. Lee, *Digital Video Recorders: First, Replay TV 4000 Must Face the Courts*, N.Y. Times, Dec. 31, 2001, at C3 (noting makers of digital video recorders made sure their devices were capable of "substantial noninfringing uses").

56. This effect was evidenced by the following fact: Twenty-one years later, when the Supreme Court revisited its ruling in the *Sony* case, multiple groups filed amicus briefs calling on the Court not to overturn *Sony*. See Gaia Bernstein, *In the Shadow of Innovation*, 31 Cardozo L. Rev. 2257, 2268 n.51 (2010) (reviewing amici briefs filed in *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005)). The Court ultimately narrowed the scope of fair use by ruling that the *Sony* safe harbor would be suspended in cases of inducement. This decision, however, did not efface the defense completely. See *Grokster*, 545 U.S. at 934–37 (holding distributor of device liable for resulting acts of infringement by third parties when distribution was done with view to promoting copyright infringement).

57. For one such scenario, see *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121–22 (2d Cir. 1930) (holding author of play "Abie's Irish Rose" had no ownership over general idea of difficult coexistence between Irish and Jewish families whose children marry each other, and thus subsequent motion picture, "The Cohens and The Kellys," was free to use idea). As Judge Learned Hand aptly explained:

Upon any work, and especially upon a play, a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the play is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the playwright could prevent the use of his "ideas," to which, apart from their expression, his property is never extended.

Id. at 121 (citing *Holmes v. Hurst*, 174 U.S. 82, 86 (1899); *Guthrie v. Curlett*, 36 F.2d 694, 696 (2d Cir. 1929)).

58. See Parchomovsky & Stein, *Originality*, *supra* note 31, at 1537–38, and sources cited therein (discussing copyright protection under merger doctrine).

59. *Id.* at 1505–06.

60. 17 U.S.C. § 102 (2012).

Accordingly, a defendant can effectively deflect an infringement claim by showing that the plaintiff's work is unoriginal. In *Feist*, the Supreme Court interpreted the originality standard to require a modicum of creativity.⁶¹ Applying this interpretation, the Court struck down the copyright in the listings in the appellee's telephone directory.⁶² The implication of a finding that the plaintiff's work is insufficiently original or creative is that any party, not just the actual defendant, can make use of the expression contained in the work.

Copyright misuse is the final example of a general copyright defense. As Professor Thomas Cotter explained, the misuse defense requires the defendant to prove that the "copyright plaintiff has attempted to broaden the scope of her intellectual property rights . . . with an anticompetitive effect."⁶³ The copyright misuse defense was invoked by licensees and third parties in several recent cases involving violations of copyrights in software.⁶⁴ In cases in which the defendant successfully proves copyright misuse, the court typically enters judgment that the copyright is unenforceable until the misuse is purged.⁶⁵ In other words, a successful showing of copyright misuse results in a temporary halt on or permanent invalidation of the plaintiff's copyright. Hence, the defendant's efforts in misuse cases yield a benefit to multiple third parties who are relieved—temporarily, or for good—of the duty to comply with the plaintiff's copyright.

B. Patent Law

Patent law predominantly recognizes individualized and general defenses. Class defenses are hard to find in this area of intellectual property law, and for a good reason. Patent rights protect inventions that are costly to create and equally expensive to protect once they are released to the world.⁶⁶ These rights therefore are formulated as broad categorical prohibitions that outlaw any use or replication of the patented invention, including reverse engineering and independent creation.⁶⁷ This protection mechanism does not tolerate exceptions. Hence, it cannot recognize privileged groups or classes of permitted users, which explains the

61. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991).

62. *Id.* at 363.

63. Thomas F. Cotter, *Misuse*, 44 Hous. L. Rev. 901, 901 (2007).

64. See *id.* at 925–31 (discussing body of case law involving misuse defense).

65. *Id.* at 903.

66. See Merges et al., *Intellectual Property*, *supra* note 30, at 131 ("[T]he central theory behind patent law . . . posits that inventions are public goods that are costly to make and that are difficult to control once they are released into the world.").

67. *Id.* at 131–32; see also Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 Yale L.J. 1742, 1784–85 (2007) (arguing high cost of identifying and formulating socially beneficial uses of patented inventions justifies broad protection of patents and patent holders' prerogative to determine permitted uses and users).

virtual absence of class defenses in patent law. At the same time, the patent holder's monopoly cannot extend beyond the perimeters of her invention.⁶⁸ Analogously to a title in land, these perimeters define the borders that others cannot cross. What these perimeters are and whether the patent holder delineated them properly are general questions that affect all actual and prospective users of the invention. The patent's perimeters also demarcate the territory within which other creators should be free to pursue their endeavors. Whether one such creator crossed the protected borders of the patent can only be decided on a case-by-case basis. This dual function of patents' perimeters explains the prevalence of general and individualized defenses in that area of the law.

Many defenses to a patent infringement suit are considered "general" under our taxonomy. These defenses go to the very issue of a patent's validity. When one of them succeeds, it invalidates the patent and releases the underlying invention to the world. Individualized defenses, on the other hand, are coverage-related. To invoke such a defense successfully, a defendant in a patent infringement suit needs to demonstrate that her invention is not covered by the plaintiff's patent.⁶⁹

The paradigmatic individualized defense to a patent infringement suit is a noninfringement defense. This defense consists of a showing by the defendant that her invention falls outside the scope of the plaintiff's patent claims. For example, if the plaintiff patented a method of purifying water and the defendant invented a different method for purifying oil, the defendant's invention might not come within the scope of the plaintiff's patent. In adjudicating a noninfringement defense, a court must first construe the claims of the plaintiff's patent in order to determine its scope. Thereafter, the court must proceed to determine whether the defendant's invention infringes any of the claims.⁷⁰ This process produces valuable information about the boundaries of the plaintiff's patent, but the court's ruling in the defendant's favor does little to shield third parties from future infringement suits. In fact, the exact opposite may happen when the court construes the patent too broadly, which, in turn, enlarges the group of potential infringers.

The reverse doctrine of equivalents also falls in the category of individualized defenses. Under this doctrine, an inventor whose invention is covered by the linguistically broad formulation of a prior patent claim is excused from patent infringement liability where the invention's technological principle is markedly different from the one it is nominally

68. Professor Jeanne Fromer aptly identified this principle as a "system of peripheral claiming." See Fromer, *supra* note 5, at 721, 730–43.

69. See Roger A. Ford, *Patent Invalidity Versus Noninfringement*, 99 *Cornell L. Rev.* (forthcoming 2013), available at <http://ssrn.com/abstract=2256207> (on file with the *Columbia Law Review*) (distinguishing between invalidity and noninfringement defenses).

70. For a superb analysis of this procedure as dependent on the patentee's peripheral claiming, see Fromer, *supra* note 5, at 731–34.

infringing. As the Supreme Court famously explained in *Westinghouse v. Boyden Power Brake Co.*:

The patentee may bring the defendant within the letter of his claims, but if the latter has so far changed the principle of the device that the claims of the patent, literally construed, have ceased to represent his actual invention, he is as little subject to be adjudged an infringer as one who has violated the letter of a statute to be convicted, when he has done nothing in conflict with its spirit and intent.⁷¹

This case involved a conflict between two inventors of a train brake. The Supreme Court employed the reverse doctrine of equivalents to find that the defendant's device did not infringe the plaintiff's prior patent as the defendant came up with a path-breaking method of applying air pressure to the brake.⁷² Court decisions under the reverse doctrine of equivalents release the allegedly infringing invention from the legal grip of a prior patent, but do not change the legal status of other potential infringers.⁷³ To fend off liability, any such infringer will have to establish a set of facts individually vindicating her invention.⁷⁴

As already noted, patent law is extremely reluctant to recognize class defenses.⁷⁵ One such defense—narrow, but far from insignificant—protects scientific experimentation. This defense splits into two separate rules: common law and statutory. The common law defense of experimental use extends to a use of another's patent solely and strictly for purposes of scientific inquiry. The user's inquiry must do science for its own sake and not pursue any gains or other benefits, financial or reputational.⁷⁶ Academics working in different basic science areas are the

71. 170 U.S. 537, 568 (1898).

72. *Id.* at 572–73. See generally Robert P. Merges, A Brief Note on Blocking Patents and Reverse Equivalents: Biotechnology as an Example, 73 J. Pat. & Trademark Off. Soc'y 878 (1991) (analyzing reverse doctrine of equivalents and relevant case law).

73. Courts, however, resort to this doctrine only on rare occasions. See Mark A. Lemley, Contracting Around Liability Rules, 100 Calif. L. Rev. 463, 468 (2012) (noting reverse doctrine of equivalents is rarely used by courts); see also *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1368 (Fed. Cir. 2002) ("Even were this court likely ever to affirm a defense to literal infringement based on the reverse doctrine of equivalents, the presence of one anachronistic exception, long mentioned but rarely applied, is hardly reason to create another.").

74. See *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1581 (Fed. Cir. 1991) ("Application of the doctrine requires that facts specific to the accused device be determined and weighed against the equitable scope of the claims, which in turn is determined in light of the specification, the prosecution history, and the prior art."), overruled on other grounds by *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282 (Fed. Cir. 2009).

75. *Supra* text accompanying notes 66–68.

76. See *Madey v. Duke Univ.*, 307 F.3d 1351, 1362 (Fed. Cir. 2002) (holding "experimental use" defense does not extend to those who use patent "in furtherance of the alleged infringer's . . . business and . . . not solely for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry").

primary beneficiaries of this defense. These academics form a cognizable class.⁷⁷

The statutory “experimental use” defense benefits one well-defined class: drug manufacturers.⁷⁸ This defense removes liability for patent infringement from uses “reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs.”⁷⁹ This defense allows drug manufacturers to use patented inventions of others in testing drugs they are planning to submit for the approval of the Food and Drug Administration (FDA). This permission extends to preclinical and other experiments with a drug that the manufacturer ultimately decided not to present to the FDA.⁸⁰

As already noted, the Patent Act recognizes a multitude of general defenses.⁸¹ These defenses are geared toward the same goal: ensuring that patent protection attaches only to those inventions that satisfy various core requirements that make inventors deserving of exclusivity.⁸² Examples of general defenses include ineligible subject matter, anticipation by the prior art, lack of utility, and obviousness.⁸³ Subject matter ineligibility means that the litigated patent covers an invention from a field of knowledge that does not qualify for patent protection.⁸⁴ Anticipation by the prior art implies that the invention specified in the disputed patent is not novel.⁸⁵ Lack of utility (or usefulness) involves a claim that an invention cannot perform its stated function.⁸⁶ And obviousness suggests that the invention for which the patent was issued can

77. For a proposal to expand the “experimental use” defense well beyond this class, see Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. Chi. L. Rev. 1017, 1046–59 (1989).

78. 35 U.S.C. § 271(e)(1) (2006).

79. *Id.* Originally, this provision was enacted in the Drug Price Competition and Patent Term Restoration Act of 1984 § 202, 21 U.S.C. §§ 301–302 (2006).

80. *Merck KGaA v. Integra Lifesciences I, Ltd.*, 545 U.S. 193, 206–08 (2005). For a recent decision extending the defense to postapproval experiments, see *Momenta Pharm., Inc. v. Amphastar Pharm., Inc.*, 686 F.3d 1348 (Fed. Cir. 2012). For a more narrow interpretation of the defense, see *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011).

81. *Supra* text accompanying note 69 (explaining nature of general defenses in the patent context).

82. See *Merges et al.*, *Intellectual Property*, *supra* note 30, at 128 (discussing “utility” requirement).

83. See *Graham v. John Deere Co.*, 383 U.S. 1, 22–26 (1966) (applying “obviousness” and “prior art” defenses); *Merges et al.*, *Intellectual Property*, *supra* note 30, at 132, 156–57, 177–82 (outlining “ineligible subject matter” and “lack of utility” defenses).

84. See John M. Golden, *Patentable Subject Matter and Institutional Choice*, 89 Tex. L. Rev. 1041, 1064–74, 1095–111 (2011) (showing how United States Patent and Trademark Office can use subject matter defense to improve patent system).

85. See, e.g., *Graham*, 383 U.S. at 22–24 (applying “prior art” defense).

86. See *Merges et al.*, *Intellectual Property*, *supra* note 30, at 177–82.

be arrived at independently by a person skilled in the relevant technology.⁸⁷

Successful demonstration of the aforementioned defenses by a defendant dooms not only the plaintiff's suit but the patent as a whole. As is typical of general defenses, acceptance of the defense by a court extinguishes the plaintiff's right and liberates third parties to behave in ways that were previously considered unlawful. Concretely, the invalidation of an issued patent that was previously presumed valid permits others to manufacture the underlying product, use it, and improve upon it without risking liability.

Patent law also recognizes a host of equitable defenses, such as misuse, inequitable conduct, and fraud on the patent office.⁸⁸ Per this Article's earlier discussion of the doctrine, misuse consists in anti-competitive behavior that seeks to extend the exclusivity bestowed by the patent beyond its legitimate limits.⁸⁹ Illegitimate restrictions on licensees that limit their ability to work with other technology providers and other forms of collaboration may amount to patent misuse.⁹⁰ Proof of patent misuse may cost the patentee her right and it is therefore a general defense in our terminology. Fraud on the patent office and inequitable conduct involve cases of "failure to disclose material information, or submission of false material information, with an intent to deceive."⁹¹ As is the case with misuse, inequitable conduct may render the patent unenforceable.⁹² Under each of those scenarios, the patented invention

87. See *Graham*, 383 U.S. at 24–26 (applying "obviousness of the differences" defense).

88. See *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 518 (1917) (establishing patent misuse doctrine); see also *Merges et al.*, *Intellectual Property*, supra note 30, at 384–93 (discussing *Motion Picture Patents* case and associated doctrine).

89. See *Merges et al.*, *Intellectual Property*, supra note 30, at 389–91 (discussing anticompetitive patent misuses such as nonmetered licenses, grantback clauses, field-of-use restrictions, and patent suppression).

90. See *id.* at 390 (underscoring overlaps between patent misuse doctrine and antitrust laws).

91. *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 872 (Fed. Cir. 1988) (en banc) (citing *J.P. Stevens & Co. v. Lex Tex Ltd.*, 747 F.2d 1553, 1559 (Fed. Cir. 1984)); see also *In re Rosuvastatin Calcium Patent Litig.*, 703 F.3d 511, 519 (Fed. Cir. 2012) (stating inequitable conduct involves fraud on patent office).

92. A general equitable defense of laches is available under patent law as well. A defendant can successfully invoke it when a patent holder delays the filing of the infringement suit for an unreasonably long period and the defendant adversely changes her position because of the delay. See, e.g., *Symbol Techs., Inc. v. Lemelson Med., Educ. & Research Found., LP*, 422 F.3d 1378, 1384–86 (Fed. Cir. 2005) (declining to require "strict time limitations" for determining when defense of laches is triggered and discussing circumstances district court might consider when deciding whether defense would apply). Proof of laches prevents the patent holder from collecting past damages. At first blush, laches appears to be a standard individualized defense. However, it can also be classified as a class defense as it bestows a tangible legal benefit on all past infringers as a group. The implication of a laches ruling is that the plaintiff is precluded from collecting damages not only from the defendant he faced but also from similarly situated infringers.

becomes fair game for any user and replicator. The three equitable defenses therefore fall into our “general defense” category.

C. Trademarks

Trademark law protects distinctive words, names, symbols, or devices “used by a person . . . in commerce . . . to identify and distinguish her goods or services.”⁹³ Like patent and copyright law, trademark law contains individualized, class, and general defenses. Trademark law speaks to the market: Its primary goals are to promote the production and improve the acquisition of goods and services.⁹⁴ Specifically, trademark law works to reduce source-identification costs for consumers and incentivize quality improvements in the trademarked goods and services, while protecting free competition on the market.⁹⁵ The generality of this triple objective coincides with the prevalent defense format in the trademark area. The vast majority of defenses that defeat trademark infringement accusations are general.⁹⁶

The prevalence of general defenses, however, does not mean that individualized and class defenses recognized by trademark law are insignificant. In fact, these defenses play an important role in delineating the scope of protection that our law affords to trademarks. Our exposition begins with individualized defenses and then moves on to discuss class and general defenses.

Under this Article’s taxonomy, no likelihood of confusion is an individualized defense: Its protective aura is confined to the individual defendant who invoked it. This defense is also the most common example of an individualized defense that fends off trademark infringement accusations. As previously noted, consumer confusion is the touchstone of trademark liability.⁹⁷ The dominant justification for enacting trademark protection holds that trademarks enable consumers to differentiate among providers of products and services.⁹⁸ This, in turn, produces two desirable effects. First, trademark protection lowers search costs for

93. See Lanham Act § 45, 15 U.S.C. § 1127 (2012).

94. See Merges et al., *Intellectual Property*, supra note 30, at 763–68 (“[T]rademarks are widely viewed as devices that help to reduce information and transaction costs . . .”).

95. See id. at 766–68 (arguing advertising lowers information costs and signals high-quality goods).

96. See *infra* notes 117–132 and accompanying text (discussing general defenses in trademark law).

97. See, e.g., 1 J. Thomas McCarthy, *McCarthy on Trademarks and Unfair Competition* § 2:1, at 2-2 to -3 (4th ed. 2011) (noting primary policy justification of trademark law is “interest of the public in not being deceived”).

98. See id. § 2:3, at 2-3 (“[A] trademark is merely a symbol that allows a purchaser to identify goods or services that have been satisfactory in the past and reject goods or services that have failed to give satisfaction.”).

consumers.⁹⁹ Second, and relatedly, it incentivizes producers to ensure the high quality of their trademarked goods and services as consumers will be able to associate the high quality with the producer.¹⁰⁰ When consumers are confused about the provenance of goods and services, they can no longer make informed purchasing decisions and the producers will not be able to recoup their investment in high quality products and services. Hence, the role of trademark protection is to prevent consumer confusion.¹⁰¹ Contrariwise, when there is no likelihood of consumer confusion, typically there is no need to impose liability.¹⁰² Accordingly, if a defendant can prove that her mark is sufficiently dissimilar from that of the plaintiff, or that she does not deal in the same goods or services as the plaintiff, a court will find no trademark infringement.

Nontrademark use is another example of an individualized defense. In principle, use of another's mark is actionable only when the mark is used in its traditional role as a source identifier.¹⁰³ Use of trademarked terms in a scholarly essay, song lyrics, or video clip of a song performance is not infringement.¹⁰⁴ Similarly, the use of a trademark in the title of a book—as in Lauren Weisberger's *The Devil Wears Prada*—or in the title of

99. See Richard A. Posner, *Economic Analysis of Law* 58 (8th ed. 2011) ("The economic function of trademarks . . . is to economize on consumer search costs by providing an assurance of uniform quality.").

100. *Id.* at 492 ("The manufacturer who has invested heavily in a trademark has a greater incentive to maintain quality, and knowing this a rational consumer may be willing to pay a premium for that manufacturer's brand.").

101. What does and does not amount to consumer confusion is subject to significant differences of opinion. See Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 *Calif. L. Rev.* 1581, 1582–84 (2006) (highlighting fractured nature of consumer confusion doctrine across circuit courts of appeal). Also subject to controversy is whether trademark law is designed to protect consumers against bad decisions or, instead, improve their position as rational selectors of products and services. See Barton Beebe, *Search and Persuasion in Trademark Law*, 103 *Mich. L. Rev.* 2020, 2021–25 (2005) (describing competing viewpoints of "sovereign" and "fool" personae in trademark advocacy and adjudication).

102. The one important exception is dilution. Dilution is a cause of action available to owners of famous marks. It broadens the scope of traditional trademark protection for famous marks, expanding it to cases where there is no risk of consumer confusion. See *infra* text accompanying notes 133–140 (describing dilution and applying this Article's taxonomy of defenses to dilution suits).

103. For insightful analysis of the trademark use requirement, see generally Stacey L. Dogan & Mark A. Lemley, *The Trademark Use Requirement in Dilution Cases*, 24 *Santa Clara Computer & High Tech. L.J.* 541 (2008) (discussing history and evolution of trademark use requirement).

104. See *Mattel, Inc. v. MCA Records, Inc.*, 296 F.3d 894, 902 (9th Cir. 2002) (explaining use of trademarked term in song is not vulnerable to trademark infringement claim); see also Merges et al., *Intellectual Property*, *supra* note 30, at 972–82 (explaining use of trademarked term in song is not infringing).

a movie—as in *Breakfast at Tiffany's*—is usually not considered a trademark infringement.¹⁰⁵

Moving now to class defenses, we begin with a paradigmatic example: the traditional (or classic) form of fair use. Traditional fair use only applies to descriptive marks, allowing third parties to use them “fairly and in good faith” to describe their own goods and services.¹⁰⁶ The operation of that defense was famously demonstrated in the Fifth Circuit’s ruling in *Zatarains, Inc. v. Oak Grove Smokehouse, Inc.*¹⁰⁷ There, the appellant, a food manufacturer, offered batter mixes under the marks “Chick-Fri” and “Fish-Fri.”¹⁰⁸ The appellees, who operated in the same trade, offered similar products under the names “chicken fry” and “fish fry.”¹⁰⁹ A trademark infringement suit ensued. Ruling for the defendant-appellee, the court reasoned that both of the plaintiff’s marks were descriptive.¹¹⁰ The court ruled that “Chick-Fri” was ineligible for protection altogether, as it failed to achieve “secondary meaning” among consumers.¹¹¹ The second, “Fish-Fri,” acquired secondary meaning and was therefore entitled, in principle, to receive protection.¹¹² However, the defendant’s use was fair, as it used the term “fish fry” in a purely descriptive sense to describe its own product.¹¹³ Pivotal to the court’s ruling was the fact that the defendant showed that “fish fry” was a generic name used to describe batter mix in general, and that many other food manufacturers used similar terms for their batter mixes.¹¹⁴ The defendant’s success in asserting the fair use defense therefore yielded a benefit for an entire class of actors—food manufacturers that produce

105. See *Mattel*, 296 F.3d at 902 (“Rogers concluded that literary titles do not violate the Lanham Act ‘unless the title has no artistic relevance to the underlying work . . . or . . . unless the title explicitly misleads as to the source or the content of the work.’” (quoting *Rogers v. Grimaldi*, 875 F.2d 944, 999 (2d Cir. 1989))); see also *Eastland Music Grp., LLC v. Lionsgate Entm’t, Inc.*, 707 F.3d 869, 872 (7th Cir. 2013) (“The titles of Truman Capote’s novella *Breakfast at Tiffany’s*, and the movie of the same name, do not infringe the rights of Tiffany & Co. because no reasonable reader or moviegoer thinks that the jeweler is the source of the book or the movie.”), petition for cert. filed, No. 12-1501 (U.S. June 17, 2013).

106. 15 U.S.C. § 1115(b)(4) (2012) (exempting from trademark infringement liability “use . . . of a term or device which is descriptive of and used fairly and in good faith only to describe the goods or services of such party, or their geographic origin”); see also *KP Permanent Make-Up, Inc. v. Lasting Impression I, Inc.*, 543 U.S. 111, 121 (2004) (holding raising affirmative defense of fair use as to descriptive mark imposes no obligation on that party to show no likelihood of consumer confusion).

107. 698 F.2d 786 (5th Cir. 1983), abrogated by *KP Permanent Make-Up*, 543 U.S. 111.

108. *Id.* at 788.

109. *Id.*

110. *Id.* at 797.

111. *Id.*

112. *Id.* at 795–96.

113. *Id.* at 796.

114. *Id.* at 788, 795–96 (“At least four other companies market coatings for fried foods that are denominated ‘fish fry’ or ‘chicken fry.’”).

coating mixes—who were using the plaintiff's mark on their own products.¹¹⁵ Although a fair use ruling has no formal precedential effect in suits against other parties, Zatarain's (as well as other mark owners) would face an uphill battle in bringing infringement claims against other parties who used their marks in a descriptive sense.¹¹⁶

Most defenses recognized by trademark law clearly fall under the category of general defenses. Consider, first, the defense of genericide.¹¹⁷ Trademarks are source identifiers. As such, they must be distinctive: They must be able to associate a good or service with their producer. At times, however, the purchasing public stops associating a mark with a manufacturer and begins to associate it instead with a good or service. When this happens, the mark loses its distinctive nature and becomes ineligible for trademark protection. Interestingly, this phenomenon, known as genericide, typically afflicts the most popular marks. Marks that fell victim to the genericide doctrine include "Cola,"¹¹⁸ "Kleenex,"¹¹⁹ and "Aspirin,"¹²⁰—even "Google" is on the "hit list."¹²¹ A defendant who successfully raises a genericide defense strips the plaintiff of her trademark protection and thereby confers a benefit on multiple other businesses.¹²² The widespread use of the once-protected marks "Cola" and "Shredded Wheat" provide real-world examples of the beneficial effect genericide generates for third parties.

115. *Id.* at 788. Although this decision yielded no formal *res judicata*, and the plaintiff was technically not precluded from suing other people, such a suit was highly unlikely to succeed.

116. The trademark owner could hardly challenge the findings of a court that ended with this categorical concluding remark: "And so our tale of fish and fowl draws to a close. We need not tarry long, for our taster's choice yields but one result, and we have other fish to fry." *Id.* at 798.

117. See Stacey L. Dogan & Mark A. Lemley, A Search-Costs Theory of Limiting Doctrines in Trademark Law, 97 *Trademark Rep.* 1223, 1241–42 (2007) [hereinafter Dogan & Lemley, A Search-Costs Theory] ("The genericness doctrine prevents a party from claiming rights to a term 'that refers . . . to the genus of which the particular product is a species.'" (quoting *Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4, 9 (2d Cir. 1976))).

118. See *Coca-Cola Co. v. Snow Crest Beverages, Inc.*, 162 F.2d 280, 283 (1st Cir. 1947) (holding mark "Cola" had become generic and was no longer protected).

119. See Dogan & Lemley, A Search-Costs Theory, *supra* note 117, at 1243–44 (explaining how "Kleenex" lost trademark protection after becoming generic).

120. *Id.* at 1242 (attesting "Aspirin" became generic term and lost trademark protection).

121. See Deven R. Desai & Sandra L. Rierson, Confronting the Genericism Conundrum, 28 *Cardozo L. Rev.* 1789, 1789–90 (2007) (suggesting "Google" might soon become generic and therefore unprotected by trademark law).

122. See *Murphy Door Bed Co. v. Interior Sleep Sys., Inc.*, 874 F.2d 95, 104 (2d Cir. 1989) (holding "Murphy bed" is generic term no longer protected as trademark).

The functionality defense has the same effect on trade dress protection.¹²³ Trade dress law extends protection to packages¹²⁴ and design.¹²⁵ However, trade dress protection cannot be obtained for functional design elements.¹²⁶ The exclusion of functional elements is intended to ensure that no single manufacturer obtains a perpetual monopoly on the design (or configuration) of a product and thereby gains an unfair advantage over its competitors.¹²⁷ Accordingly, if a defendant shows that a product design for which a plaintiff claims trade dress protection is functional, the plaintiff will leave the courthouse empty-handed and the entire world will be entitled to use the relevant design.

Abandonment is also a general defense because it opens the trademark for use by anyone. A trademark is considered abandoned when its owner discontinues use with intent not to resume such use.¹²⁸ Nonuse by the registered owner for a period of three consecutive years constitutes “prima facie evidence of abandonment.”¹²⁹ Once abandoned, the mark’s owner may not commence infringement suits against users.¹³⁰ Furthermore, in *Major League Baseball Properties, Inc. v. Sed Non Olet Denarius, Ltd.*—a case involving a dispute over the rights in the “Brooklyn Dodgers” mark—the court ruled that after the mark was abandoned by the plaintiffs, resumption of use by the registered owner would only

123. Indeed, some commentators have noted that functionality is the trade dress equivalent of genericide. See, e.g., Dogan & Lemley, A Search-Costs Theory, *supra* note 117, at 1247 & n.99.

124. See, e.g., *McNeil Nutritionals, LLC v. Heartland Sweeteners, LLC*, 511 F.3d 350, 362–69 (3d Cir. 2007) (recognizing trade dress protection in packaging of artificial sweeteners).

125. See, e.g., *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205, 212–13, 216 (2000) (distinguishing between “design” and “packaging” of product and holding “design” entitled to protection as unregistered trade dress only upon acquiring secondary meaning); *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 776 (1992) (holding trade dress protectable even without secondary meaning and according protection to decor of fast food restaurant).

126. See *Traffix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 34–35 (2001) (explaining functionality doctrine and denying protection to functional trade dress).

127. See 15 U.S.C. § 1125(a)(3) (2012) (“In a civil action for trade dress infringement under this chapter for trade dress not registered on the principal register, the person who asserts trade dress protection has the burden of proving that the matter sought to be protected is not functional.”); *Traffix Devices, Inc.*, 532 U.S. at 29 (explaining burden of proof imposed by statute on party seeking trade dress protection “gives force to the well-established rule that trade dress protection may not be claimed for product features that are functional”); *Qualitex Co v. Jacobson Prods. Co.*, 514 U.S. 159, 164–65 (1995) (applying functionality defense).

128. 15 U.S.C. § 1127.

129. *Id.*

130. See, e.g., Radiance A. Walters, Partial Forfeiture: The Best Compromise in Trademark Licensing Protocol, 91 J. Pat. & Trademark Off. Soc’y 126, 137 (2009) (observing that, following abandonment, “third parties are free to use and exploit” abandoned marks).

cover new uses and would not grant any rights retroactively against users of the mark during the abandonment period.¹³¹ Moreover, such users might have a superior claim to the mark based on their use during the abandonment period as compared to the abandoning owner.¹³²

Our taxonomy is also applicable to defenses against suits for dilution. Dilution consists of acts that diminish the mark's selling power or dim its allure.¹³³ Protection against dilution is reserved solely for famous marks.¹³⁴ The Lanham Act defines two types of dilution: blurring and tarnishment. Blurring consists of acts that "impair[] the distinctiveness of . . . famous mark[s]."¹³⁵ Tarnishment consists of acts that "harm[] the reputation of [a] famous mark."¹³⁶ The Lanham Act also contains a list of exclusions, exempting from liability for dilution (i) "advertising or promotion that permits consumers to compare goods or services";¹³⁷ (ii) "identifying and parodying, criticizing, or commenting upon the famous mark owner or the goods or services of the famous mark owner";¹³⁸ (iii) "[a]ll forms of news reporting and news commentary";¹³⁹ and (iv) "[a]ny noncommercial use of a mark."¹⁴⁰ A claim that one's use of a famous mark does not impair its distinctiveness or does not harm its reputation is an individualized defense. This defense vindicates only the user's entitlement and nobody else's. The exclusions for news reporting and parodying and for comparative advertising are class defenses. These defenses benefit three distinct classes: reporters and newscasters, parodists, and advertisers. Finally, a showing by a defendant that the plaintiff's mark is not famous is a general defense. When this defense becomes available, it opens the mark up to use by multiple and unspecified users.

D. Trade Secrets

Legal protection of trade secrets extends to technologies and business information that a firm develops and keeps confidential in order to outperform its competitors. Trade secrets law prohibits misappropriation of commercial information that is not generally known to the public.¹⁴¹ Information that may be claimed as a trade secret ranges from business strategies, market analyses, and customer lists to sophisti-

131. 817 F. Supp. 1103, 1131–35 (S.D.N.Y. 1993), vacated, 859 F. Supp. 80 (S.D.N.Y. 1994) (vacating pursuant to parties' settlement).

132. *Id.* at 1132.

133. Clarisa Long, Dilution, 106 Colum. L. Rev. 1029, 1034–35 (2006).

134. *Id.* at 1030–35.

135. 15 U.S.C. § 1125(c)(2)(B) (2012).

136. § 1125(c)(2)(C).

137. § 1125(c)(3)(A)(i).

138. § 1125(c)(3)(A)(ii).

139. § 1125(c)(3)(B).

140. § 1125(c)(3)(C).

141. See Merges et al., Intellectual Property, *supra* note 30, at 35–37 (defining general scope of trade secrets protection).

cated machinery, software, and chemical formulae (famously exemplified by the Coca-Cola formula, parts of Google's search algorithm, and Apple's OS X software).¹⁴² The law defines "misappropriation" as encompassing any acquisition or use of another's trade secret by "improper means,"¹⁴³ including breaches of contract, torts, and crimes, as well as deviations from the "accepted standards of commercial morality."¹⁴⁴ As the Supreme Court explained, this broad protection of trade secrecy "promotes the sharing of knowledge[] and the efficient operation of industry" by helping "the individual inventor to reap the rewards of his labor."¹⁴⁵

The protection the law affords to trade secrecy is not unlimited.¹⁴⁶ An alleged infringer can raise a number of defenses, which, if successful, will exempt the defendant from liability for trade secrecy infringement. This Article's taxonomy illuminates the functionality of those defenses, as they, too, come in the three varieties that we devised. Some of those defenses are individualized, while others are class and general defenses.

Of the individualized defenses, the most important are independent development¹⁴⁷ and reverse engineering.¹⁴⁸ A defendant who successfully

142. Margo E.K. Reder & Christine Neylon O'Brien, Managing the Risk of Trade Secret Loss Due to Job Mobility in an Innovation Economy with the Theory of Inevitable Disclosure, 12 J. High Tech. L. 373, 382 (2012).

143. See Unif. Trade Secrets Act § 1(2) (amended 1985).

144. See *E.I. du Pont de Nemours & Co. v. Christopher*, 431 F.2d 1012, 1014–17 (5th Cir. 1970) (explaining "improper means" include violations of business ethics even when those do not amount to an actionable tort); Unif. Trade Secrets Act § 1(1) (defining misappropriation); Restatement (Third) of Unfair Competition § 40 (1995) (outlining rules applicable to common law actions in tort or restitution for misappropriation); see also Richard F. Dole, Jr., The Uniform Trade Secrets Act—Trends and Prospects, 33 Hamline L. Rev. 409, 424–27 (2010) (articulating meaning of "improper means" in context of trade secrecy violations); Kurt M. Saunders, The Law and Ethics of Trade Secrets: A Case Study, 42 Cal. W. L. Rev. 209, 210, 221 (2006) (explaining "improper means" in context of trade secrecy violations and attesting they include violations of business ethics).

145. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 493 (1974).

146. This protection entitles the aggrieved owner of a trade secret to injunctive and compensatory relief. See Unif. Trade Secrets Act §§ 2, 3; see also Dole, *supra* note 144, at 432–43 (describing various approaches to injunctive relief and damages in Uniform Trade Secrets Act jurisdictions). The Uniform Trade Secrets Act was adopted by nearly all states and the District of Columbia. States that have yet to adopt it include Massachusetts, New York, and North Carolina. For more detailed information, see Legislative Fact Sheet—Trade Secrets Act, Unif. Law Comm'n, [http://www.uniformlaws.org/LegislativeFactSheet.aspx?title=Trade Secrets Act](http://www.uniformlaws.org/LegislativeFactSheet.aspx?title=Trade%20Secrets%20Act) (on file with the *Columbia Law Review*) (last visited Sept. 27, 2013). These states protect trade secrecy through enforcement of a roughly similar set of rules, summarized by section 40 of the Restatement (Third) of Unfair Competition.

147. See Restatement (Third) of Unfair Competition § 43 cmt. b (summarizing independent development defense, also identified as "independent discovery"); see also *Kewanee Oil*, 416 U.S. at 476 ("A trade secret law . . . does not offer protection against discovery by fair and honest means, such as by independent invention . . .").

148. See *Kewanee Oil*, 416 U.S. at 476 (attesting law allows acquisition of another's trade secret "by so-called reverse engineering, that is by starting with the known product

raises either defense benefits only herself. For example, when the defendant demonstrates that she independently arrived at the plaintiff's secret baby food formula through a process of trial and error or by dissolving the plaintiff's product into its constituent ingredients, she will be entitled to an independent creation or reverse engineering defense.¹⁴⁹ Either defense, if successfully asserted, would benefit her and nobody else.¹⁵⁰

"General skills" and "public interest" defenses respectively represent the core class and general defenses. These defenses are available to different groups of information users. The general skills defense unlocks the information for the plaintiff's employees as a class, allowing them to use the general training they receive from the plaintiff for other purposes so they can stay competitive in the job market.¹⁵¹ Individuals falling into this class are permitted by the law to move the information, as part of their working skills, from one workplace to another. As an illustration of how the defense operates, consider a developer of cloud software who moves from Pear Inc. to work for another producer of cloud technology. Pear Inc. asks the court to enjoin the move, alleging that its inevitable consequence would be the revelation of the company's trade secrets to the developer's new employer. The court rules that, although the developer is not permitted to use or reveal any of Pear's projects that remain secret, she is permitted to use the general knowledge of cloud technologies that she acquired while working for that company.¹⁵² Importantly, the general skills defense similarly privileges all the other employees of the firm. Hence, it is a paradigmatic class defense under our taxonomy.

The public interest defense, by contrast, is available in a very narrow spectrum of cases that involve a compelling societal interest in the disclo-

and working backward to divine the process which aided in its development or manufacture"); Unif. Trade Secrets Act § 1 cmt. (explaining reverse engineering is defined as a proper means of discovery under Restatement of Torts).

149. Cf. *Hauck Mfg. Co. v. Astec Indus., Inc.*, 376 F. Supp. 2d 808, 821 (E.D. Tenn. 2005) (finding development of similar combustion burners was permitted when trade secret was available to alleged infringer or when alleged infringer reverse engineered burners).

150. If the defendant subsequently decided to share the information with the rest of the world, instead of keeping it to herself, she would be free to do so. Hence, in the area of trade secrets law, successfully raising an individualized defense might subsequently benefit the public at large. For economic justification of the reverse engineering defense, see Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 *Yale L.J.* 1575, 1582-90 (2002).

151. See *ILG Indus., Inc. v. Scott*, 273 N.E.2d 393, 396 (Ill. 1971) (explaining how mobile and free economy prevents compelling "[o]ne who has worked in a particular field . . . to erase from his mind all of the general skills, knowledge and expertise acquired through his experience").

152. Cf. *AMP Inc. v. Fleischhacker*, 823 F.2d 1199, 1205 (7th Cir. 1987) (underscoring employees' freedom to move their general skills and knowledge from one job to another without being constrained by trade secret laws); *CVD, Inc. v. Raytheon Co.*, 769 F.2d 842, 852 (1st Cir. 1985) (same).

sure of information otherwise deserving of protection by the trade secrecy law.¹⁵³ An example can help explain the nature of the defense. Consider a scientist working for a tobacco company. The scientist discovers that the company uses a carcinogenic compound in its cigarettes, a fact that the company kept hidden from the rest of the world. Troubled by this finding, he decides to reveal this information to the public. Should the company sue the scientist for trade secrecy violation, the court would likely excuse him from liability based on the public interest defense. The “public interest” defense is appropriately categorized as “general” because it allows defendants, like the scientist in the tobacco example, to disclose secret information to the rest of the world with impunity and thereby annul the trade secrecy protection.¹⁵⁴ In doing so, the defendant nullifies any rights the plaintiff may have had in that intellectual property and allows full access to it by the rest of the world.

E. Summary

The preceding discussion demonstrated how our tripartite taxonomy illuminates the conceptual structure and functionality of intellectual property defenses. The examples above feature core defenses available to individuals and firms sued for violating intellectual property rights. These examples are merely illustrative, not exhaustive. Yet our conceptual framework covers all intellectual property defenses. As shown in Table 1 below, this framework provides a comprehensive mapping of all defenses afforded by our intellectual property law. Each and every one of those defenses fits the tripartite categorization of individualized, class, and general defenses.

153. See Restatement (Third) of Unfair Competition § 40 cmt. c (1995) (delineating limited scope of permitted disclosure under “public interest” defense).

154. See, e.g., Adam Cohen, Securing Trade Secrets in the Information Age: Upgrading the Economic Espionage Act After *United States v. Aleynikov*, 30 Yale J. on Reg. 189, 231 (2013) (“There are some trade secrets in which the public interest in disclosure is particularly great. These include information that a product is unsafe or unreliable, a threat to the environment, or invasive of personal privacy.”).

TABLE 1: INTELLECTUAL PROPERTY DEFENSES

	Individualized Defenses	Class Defenses	General Defenses
Copyright	fair use independent creation lack of substantial similarity unprotected element copying idea copying facts public domain scenes a faire	fair use parody	idea-expression merger unoriginality inequitable conduct misuse
Patent	noninfringement reverse doctrine of equivalents	experimental use	ineligible subject matter prior art obviousness lack of utility inequitable conduct / fraud on the patent office misuse exhaustion
Trademark	no likelihood of consumer confusion nontrademark use	fair use	abandonment exhaustion genericide functionality (for trade dress)
Trade Secrecy	independent development reverse engineering	general skills	public interest

II. THE SPECIAL CASE OF CLASS AND GENERAL DEFENSES

Individualized defenses pose no special challenge to policymakers. These defenses feature a near perfect alignment between the flows of costs and benefits associated with raising the defense. A defendant who raises an individualized defense typically bears the full cost of litigating the defense and stands to enjoy the full benefit of the defense if success-

ful. In other words, in the case of individualized defenses, all costs and benefits are concentrated in a single person.¹⁵⁵ Individualized defenses, therefore, represent a case of full internalization of costs and benefits. This means that a defendant will raise an individualized defense when the expected benefit (represented by the probability of success multiplied by the gain from winning) is greater than the cost. If a defendant estimates that the cost of defending herself against an infringement suit exceeds the benefit, she will simply forego raising the defense. In either case, there will be no adverse consequences for other users of the intellectual property. For example, if Anne gets sued for copyright infringement and decides to settle the case rather than raise a “no substantial similarity” defense, it will not affect Beth in the least. If Beth subsequently gets sued by the same plaintiff, her odds of winning the case will not be affected by Anne’s settlement decision.

With class and general defenses things are markedly different. Class and general defenses differ from individualized defenses in that they create positive spillovers, or externalities, that affect many other individuals and sometimes society at large.¹⁵⁶ In the case of class and general defenses, therefore, there is a misalignment of costs and benefits: A defendant who raises a class or general defense shoulders the full cost of litigating it but receives only a fraction—sometimes, a small fraction—of the benefit. The problem is particularly acute in the case of general defenses. A defendant who successfully raises a general defense that leads to the invalidation of an intellectual property right bestows a benefit on a large number of users who now can use the underlying intellectual asset without fearing liability. For example, when Carol is sued for a patent infringement and she manages to show that the invention is obvious, she helps not only herself, but also all other users of the invention who have not been sued. Thanks to Carol, these users and many others become able to use the invention in the future. Whether Carol’s private incentive to invalidate the patent is commensurate with the underlying benefit to society is, of course, an altogether separate question and a troubling one.

155. The defendant thus has all the economic characteristics of a single owner. See Harold Demsetz, *Toward a Theory of Property Rights*, 57 *Am. Econ. Rev.* 347, 355–56 (1967) (developing single owner standard).

156. See Joseph Scott Miller, *Joint Defense or Research Joint Venture? Reassessing the Patent-Challenge-Bloc’s Antitrust Status*, *Stan. Tech. L. Rev.*, Mar. 30, 2011, at 1, 3, <http://stlr.stanford.edu/pdf/miller-joint-defense.pdf> (on file with the *Columbia Law Review*) [hereinafter Miller, *Joint Defense*] (“A patent challenger who defeats a patent wins spoils that it must share with the world, including all its competitors. This forced sharing undercuts an alleged infringer’s incentive to stay in the fight to the finish—especially if the patent owner offers an attractive settlement.”); cf. Robert P. Merges, *Justifying Intellectual Property* 300 (2011) (“Property does more than bind unknown individuals to one another. It also unites all individuals in a larger set of relations.”); Amy Kapczynski, *The Access to Knowledge Mobilization and the New Politics of Intellectual Property*, 117 *Yale L.J.* 804, 825–39 (2008) (observing how intellectual property regimes pit multiple interest holders in intellectual property area against each other as groups).

As a self-interest maximizer, Carol may well decide not to challenge the patent's validity.

Our analysis has been confirmed in a forthcoming article by Roger Ford.¹⁵⁷ Ford observed that, in patent litigation, defendants tend to raise a disproportionately high number of what we term "individualized" defenses relative to what we term "general" defenses. In particular, he noted that for most defendants, asserting a narrow noninfringement claim in combination with a comprehensive denial of the patent's validity is both costly and risky. Defendants consequently prefer to raise narrow noninfringement claims that focus on the patent's scope and tend not to challenge the patent's validity. From their private perspective, this strategy yields the highest expected return net of the litigation cost.¹⁵⁸

Class defenses also privilege third parties. When a court accepts a class defense, the benefit accrues not only to the defendant who successfully asserted it, but also to other members of the group to which the defendant belongs. For example, when an employee sued for violating a trade secret successfully proves that the information claimed as a trade secret falls into the category of general skills, she confers a benefit on her coworkers and on multiple other employees who received the same training and can now use their enhanced skills to secure better employment opportunities.

To be sure, this Article is not the first to observe the presence of positive third-party effects in the domain of intellectual property. Professor Wendy Gordon pointed out that copyrighted works create informational benefits for nonusers.¹⁵⁹ Elaborating on this theme, Professor Polk Wagner demonstrated the existence of information "cascades" in all the fields of intellectual property.¹⁶⁰ Professors Gordon and Wagner, however, focused strictly on the beneficial effects emanating from the recognition of intellectual property rights as opposed to defenses. Professors Brett Frischmann and Mark Lemley showed, in an influential contribution, that the world of intellectual property is replete with spillovers.¹⁶¹ Importantly, they noted the presence of spillover effects also in the context of defenses.¹⁶² Professors John Thomas,¹⁶³ Jay Kesan,¹⁶⁴

157. See Ford, *supra* note 69 (manuscript at 32–42).

158. *Id.* (manuscript at 25–26).

159. Wendy J. Gordon, *Toward a Jurisprudence of Benefits: The Norms of Copyright and the Problem of Private Censorship*, 57 U. Chi. L. Rev. 1009, 1043–46 (1990).

160. R. Polk Wagner, *Information Wants to Be Free: Intellectual Property and the Mythologies of Control*, 103 Colum. L. Rev. 995, 1003–14 (2003).

161. Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 Colum. L. Rev. 257, 258 (2007).

162. *Id.* at 286–89; see also Michele Boldrin & David K. Levine, *The Case Against Patents*, J. Econ. Persp., Winter 2013, at 3, 16 (noting defendant facing patent infringement allegations "receives only a slice of the overall benefits from winning the lawsuit, and will [therefore] be willing to spend less on such lawsuits than it would if it were to receive all the benefits").

and Joseph Miller,¹⁶⁵ in independent contributions, noted that actors who expose invalid patents bestow a benefit on third parties and called for the use of “bounties” to encourage opposition to suspect patents while they are being examined by the U.S. Trademark and Patent Office¹⁶⁶ and when they are asserted in court. Finally, Edward Hsieh wrote an insightful Note proposing to tackle the proliferation of bad patents by a mandatory joinder procedure that would consolidate all potential patent infringers in a single action, thereby enabling them to share the defense expenses and mount an effective opposition to the patentee’s extortionary suit.¹⁶⁷ Hsieh compared the effects of this procedure with those of defendant class actions and reexamination of patents.¹⁶⁸ He concluded that mandatory joinder stands out as the best solution to the bad patent problem.¹⁶⁹

This Article seeks to contribute to the literature by offering a sustained analysis of the costs and benefits associated with intellectual property defenses based on the taxonomy devised in Part I.¹⁷⁰

163. John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. Ill. L. Rev. 305, 342–52.

164. Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 Berkeley Tech. L.J. 763, 787–97 (2002).

165. Joseph Scott Miller, *Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents*, 19 Berkeley Tech. L.J. 667, 668 (2004).

166. See also Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won’t Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 Berkeley Tech. L.J. 943, 960–64 (2004) (calling for more rigorous patent review by Patent Office).

167. Edward Hsieh, *Note, Mandatory Joinder: An Indirect Method for Improving Patent Quality*, 77 S. Cal. L. Rev. 683, 688–700 (2004).

168. See *id.* at 701–03; see also Brian Noh, *Note, Fair Copyright Litigation: The Reverse Class Action Lawsuit*, 9 Hastings Bus. L.J. 123, 123, 129–40 (2012) (proposing consolidating copyright defendants in class action); Matthew K.K. Sumida, *Comment, Defendant Class Actions and Patent Infringement Litigation*, 58 UCLA L. Rev. 843, 843, 881–86 (2011) (same). For a seminal work on defendant class action, see generally Assaf Hamdani & Alon Klement, *The Class Defense*, 93 Calif. L. Rev. 685 (2005).

169. Hsieh, *supra* note 167, at 701–02. Hsieh also proposed to supplement mandatory joinder with fee shifting and elimination of the validity presumption. *Id.* at 703–04. We believe that the mandatory joinder rule is too harsh—both *per se* and because it pools defendants whose defenses are strictly individual with defendants asserting class and general defenses. Defendants whom the plaintiff is yet to sue do not always know whether they will be sued and what their defense would be. Hence, they may argue in good faith that it should be within their rights to decide about the defense only after being sued. Forcing them to join the defendants’ alliance would be unfair and potentially inefficient as well. For these reasons, we recommend a voluntary joinder mechanism that incorporates an opt-out provision that retains the defendants’ procedural autonomy. See *infra* Part III.

170. See also Ford, *supra* note 69 (manuscript at 54) (arguing patent challengers prefer to rely on noninfringement defenses, instead of attacking patent’s validity, and proposing reform that “would permit a party that invalidates a patent to recover from industry competitors that otherwise would have been susceptible to a claim for infringing that patent”). Ford would allow successful patent challengers to sue competitors for

Conceptually, general defenses are the mirror image of rights in rem. The defining characteristic of rights in rem is that they avail against the rest of the world. When the law recognizes a right in rem, it subjects the rest of the world to that right; when a court recognizes a general defense, it relieves the public at large from a duty. General defenses can therefore be dubbed in rem defenses. Class defenses occupy a conceptual middle ground. They do not negate the underlying right with respect to which they are raised. Rather, they create an immunity zone for a specific activity. Class defenses therefore can be thought of as carve-outs of in rem rights.

Because general and class defenses generate positive externalities for third parties, their implementation involves a mismatch between the private cost-benefit analysis of the defendant and that of society at large. From a societal standpoint, a defense should be raised whenever the benefit it is expected to yield to society as a whole exceeds the cost of asserting it. Actual defendants, though, in deciding how much to invest in litigation do not consider the full societal benefit they generate. Instead, their decision as to whether to raise a class or general defense is based strictly on the fraction of the societal benefit they stand to capture. The part that accrues to society at large does not affect their calculus.

An example can prove helpful in demonstrating this point. Imagine that Emma is sued for a copyright or patent infringement. Emma believes that the suit is baseless as it is predicated on an intellectual property right that should not have come into existence in the first place. In order to prove this in court, Emma would have to incur a cost of \$100,000. The private benefit Emma would receive from winning the case is only \$30,000. The value of a victory to society is much greater; assume that it is \$2,000,000. From a societal standpoint, invalid intellectual property rights are legal roadblocks that thwart future innovation and creativity. Their removal can unlock multiple productive opportunities for a large number of individuals and companies. Emma, however—and any individual defendant, for that matter—would not be interested in the broader societal interest. As a rational self-interest maximizer, she would focus solely on her private benefit (\$30,000) and private cost (\$100,000) and would choose to refrain from waging a legal battle.¹⁷¹

More generally, a defendant in an intellectual property infringement suit—indeed, any legal suit—has three options: (a) she can surrender without a fight; (b) she can settle the case out of court; and (c) she

accounting and recover royalties that they would otherwise have paid to the patent's holder. *Id.* Unlike us, Ford recommends no joinder procedure, nor does he believe that the patent challenger should suffice herself with expense reimbursement. *Id.* For further comparison between Ford's and our proposals, see *id.* (manuscript at 55–58).

171. See Steven Shavell, *Foundations of Economic Analysis of Law* 390 (2004) [hereinafter Shavell, *Foundations*] ("The plaintiff will sue when his cost of suit is less than his expected benefits from suit.").

can defend herself in court. If the defendant estimates that she stands no chance or does not have the financial wherewithal to fight the suit, she may decide to surrender without a fight, especially in those cases in which the plaintiff is seeking injunctive relief. A rational defendant would choose to settle or litigate only when her expected private benefit exceeds her private cost. When this condition obtains, defendants often choose to settle rather than litigate. The reasons are simple: Settling a dispute is typically cheaper than litigating and involves less risk. Importantly, holders of intellectual property rights can enhance the attractiveness of settling relative to litigating by offering defendants tempting settlements. Rightsholders, for their part, also have a clear preference to settle: For them, settling economizes on enforcement costs and eliminates the risk of an adverse outcome in court that may lead to the loss of the right. For that reason, as already mentioned, rightsholders prefer to file their suits selectively against weak defendants.¹⁷²

The upshot of our analysis is that defendants would choose to engage in an all-out legal battle if and only if the private gain from litigation exceeds the private cost and litigating dominates settling.¹⁷³ It is critical to understand, though, that even then, the investment of private defendants in general and class defenses would fall way short of the social benchmark. To see this, let's revisit our previous example involving Emma. Assume now that the private benefit to Emma went up to \$150,000 while the cost of litigating remains \$100,000. Now, Emma would choose to litigate, but the amount she would invest in litigating the case (up to \$150,000) is much lower than the social benefit (\$2,000,000). This means that Emma would not necessarily secure the best possible legal representation, and if the rightsholder is willing to expend much greater resources on the litigation, he may end up winning the case in court.¹⁷⁴

Our discussion leads to a well-established economic insight, namely, the importance of developing mechanisms for internalizing external effects when it is cost-effective to do so.¹⁷⁵ Externalities come in two varieties: negative and positive. Negative and positive externalities are essen-

172. Cf. Rebecca S. Eisenberg, Patent Costs and Unlicensed Use of Patented Inventions, 78 U. Chi. L. Rev. 53, 68–69 (2011) (explaining patent entrepreneurs “are likely to be experienced in the strategic moves of demand letters, license negotiations, and litigation[,] [and] [o]wners of large patent portfolios may also enjoy economies of scale in patent assertion” (footnote omitted)). Therefore, responding to demand letters may become cost prohibitive, making it logical for patent users to pay for licenses “without the added cost of careful scrutiny.” *Id.*

173. Cf. Ben Depoorter, The Upside of Losing, 113 Colum. L. Rev. 817 (2013) (showing people may be willing to pursue losing case to highlight their misfortune and trigger legal reform).

174. See Parchomovsky & Stein, Relational Contingency, *supra* note 19, at 1315–17 (showing how similarly disadvantaged litigants are forced into cheap settlements).

175. See N. Gregory Mankiw, Principles of Economics 196–99 (6th ed. 2012) (defining externalities and stating social need to eliminate them when feasible).

tially two sides of the same coin. Negative externalities arise when actors do not bear the full cost of their actions and create the problem of excess production. The paradigmatic example of a negative externality is industrial pollution.¹⁷⁶ Absent regulation, industrialists can shift the cost associated with pollution to the rest of our society, while enjoying the full benefit. Consequently, the levels of pollution they generate exceed the socially optimal level.

Positive externalities are present when actors do not enjoy the full benefit of their behavior. In the case of activities that give rise to positive externalities, the social concern is with underproduction, or underinvestment, in the underlying activities. As we showed, this is precisely the problem with class and general defenses. When actual defendants are left to their own devices, class and especially general defenses will be underproduced.

Another way to look at it is through the lens of collective action theory.¹⁷⁷ While all potential users of intellectual property assets would like to see baseless intellectual property claims challenged and invalidated, none of them would like to shoulder the cost of the legal campaign that could lead to this result. Rather, each individual user would prefer that the cost fall squarely on someone else. To see why, it is imperative to understand that the invalidation of the right would benefit all users irrespectively of their contribution to the legal battle. Hence, from the perspective of each individual actor, it is best to sit on the sideline and let someone else incur the cost of challenging the right. As articulated thus far, the rightsholder ultimately picks a person (or a firm) against whom to enforce his right.¹⁷⁸ Yet, the collective action problem persists even after legal action is commenced against a particular defendant, which means that other potential defendants would prefer to free ride and not join the legal fray.

This is not to argue that class and general defenses will never be raised. Quite the contrary: Our analysis demonstrates that defendants will invoke class and general defenses when their expected private benefit

176. See A.C. Pigou, *The Economics of Welfare* 172–203 (4th ed. 1932) (giving classic account of negative externalities and their internalization through taxes); R.H. Coase, *The Problem of Social Cost*, 3 *J.L. & Econ.* 1, 1–15 (1960) (examining allocations of legal entitlements and concluding that, in absence of transaction costs, each allocation will efficiently eliminate externalities). See generally William J. Baumol, *On Taxation and the Control of Externalities*, 62 *Am. Econ. Rev.* 307 (1972) (integrating Coasean trade in Pigou's model); E.C. Pasour, Jr., *Pigou, Coase, Common Law, and Environmental Policy: Implications of the Calculation Debate*, 87 *Pub. Choice* 243 (1996) (analyzing Coase's and Pigou's theories).

177. See generally Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (2d ed. 1971) (offering classic account of collective action problems).

178. See *supra* notes 156–172 and accompanying text (describing problem of positive externalities present in class and general defenses and incentives of rightsholders to choose weak defendants).

exceeds the private expense.¹⁷⁹ It is equally clear that class and general defenses are asserted in many real-world cases. Our analysis develops two mutually related insights: We posit that class and general defenses are invoked at a lower rate than is socially optimal; and we also argue that, in the subset of cases in which those defenses are invoked, the resources invested in litigating them fall short of the socially optimal level. Both problems are inimical to activities that produce positive externalities.

It likewise bears emphasis that the aforementioned problems do not apply with equal force to all class and general defenses in intellectual property law. Some class and general defenses, such as the merger defense in copyright law, can be raised and litigated at a relatively low cost. The same is true of the lack of originality defense. Indeed, the cost of raising general defenses to copyright infringement suits is comparatively low. Many of those defenses can be established by arguments that rely on common sense.¹⁸⁰ In patent law, on the other hand, the cost of proving general defenses is very high.¹⁸¹ While there is no empirical data on the cost of litigating general defenses in trade secrecy and trademark cases, we estimate that the cost of establishing such defenses would be much higher than in copyright cases, but generally lower than in patent cases.

The externalities problem has been the subject of extensive discussion in the economic literature.¹⁸² Economic theory suggests that positive and negative externalities alike should be internalized when the benefit from internalization exceeds the cost.¹⁸³ The most common way to

179. See *supra* text accompanying note 174 (illustrating how self-interested defendants underinvest in general and class defenses).

180. See, e.g., *Gordon v. McGinley*, 502 F. App'x 89, 90 (2d Cir. 2012) (“[C]opyright infringement analysis involves a ‘common sense’ determination, based solely on the works themselves, as to whether the allegedly infringing work is substantially similar to the copyrighted work, focusing on ‘total concept and overall feel.’” (quoting *Peter F. Gaito Architecture, LLC v. Simone Dev. Corp.*, 602 F.3d 57, 66 (2d Cir. 2010))); *Hamil Am., Inc. v. GFI*, 193 F.3d 92, 102 (2d Cir. 1999) (adjudicating copyright infringement allegation by “[g]ood eyes and common sense” (quoting *Soptra Fabrics Corp. v. Stafford Knitting Mills, Inc.*, 490 F.2d 1092, 1093 (2d Cir. 1974))).

181. See, e.g., Jay P. Kesan & Andres A. Gallo, *Why “Bad” Patents Survive in the Market and How Should We Change?—The Private and Social Costs of Patents*, 55 *Emory L.J.* 61, 68–69, 69 n.35 (2006) (“According to a 1999 study by the Intellectual Property Law Association, the median total cost through the end of suit for patent litigation where the dollar amount at risk is \$10–\$100 million is \$2,225,000. Just to take the case through discovery costs \$1,491,000.” (footnote omitted) (quoting Daniel A. Crane, *Exit Payments in Settlement of Patent Infringement Lawsuits: Antitrust Rules and Economic Implications*, 54 *Fla. L. Rev.* 747, 757 (2002))).

182. See *supra* note 176 (citing prominent works discussing externalities problem); see also Rolf Weder & Herbert G. Grubel, *The New Growth Theory and Coasean Economics: Institutions to Capture Externalities*, 129 *Rev. World Econ.* 488, 490 (1993) (underscoring knowledge as positive externality created by patent system).

183. See Abraham Bell & Gideon Parchomovsky, *Of Property and Antiproperty*, 102 *Mich. L. Rev.* 1, 34–38 (2003) (discussing antiproperty easements which may “curb overexploitation by forcing the internalization of costs” and “achieve this goal by

internalize negative externalities is to force the externality producer to bear the full cost of her actions. This result is typically achieved through the imposition of a tax or a fine (or another penalty that may include an obligation to compensate the victim) on the party causing the negative externalities.¹⁸⁴ The available solutions to the positive externalities problem are: (1) government subsidization of the underlying activity in order to remedy the underinvestment problem; or (2) the imposition of a charge on the beneficiaries commensurate with the benefit they receive and reimbursement of that benefit's producer.

The subsidy solution presents many familiar problems of its own: It consumes public resources,¹⁸⁵ spurs wasteful expenditures on lobbying by interest groups,¹⁸⁶ and foments rent-seeking among politicians.¹⁸⁷ Our reform proposal in Part III therefore steers away from subsidies and focuses on charging the beneficiaries. We develop two innovative mechanisms that ameliorate the positive externalities problem in intellectual property litigation by allocating the cost of class and general defenses to the larger pool of individuals and firms that benefit from those defenses.

III. PROCEDURE AND SUBSTANCE IN INTELLECTUAL PROPERTY DEFENSES

Under the current legal regime, a single defendant must bear the cost of raising and litigating general and class defenses, while the benefits of this endeavor are spread over a much larger group of individuals. As shown in Part II, this state of affairs is neither fair nor efficient. It results in underproduction of class and general defenses and in the singling out of relatively weak defendants by intellectual property holders. The current state of affairs can be summarized by the caption "one for all." These words, however, are typically complemented by "all for one" in order to convey the virtues of unity, solidarity, and collective action.

deliberately creating a holdout problem—a strategic problem that many commonly see as the bane of the property system"); Demsetz, *supra* note 155, at 354–57 ("[P]roperty rights arise when it becomes economic for those affected by externalities to internalize benefits and costs."). See generally Daniel B. Kelly, *Strategic Spillovers*, 111 *Colum. L. Rev.* 1641 (2011) (investigating externalities entrepreneurs).

184. See Pigou, *supra* note 176, at 172–203 (attesting taxes and subsidies can ameliorate problem of both positive and negative externalities).

185. See Alan O. Sykes, *The Questionable Case for Subsidies Regulation: A Comparative Perspective*, 2 *J. Legal Analysis* 473, 475–76 (2010) (surveying economic literature showing subsidies can be socially costly).

186. See Lynn A. Stout, *Uncertainty, Dangerous Optimism, and Speculation: An Inquiry into Some Limits of Democratic Governance*, 97 *Cornell L. Rev.* 1177, 1196 (2012) ("[A]n extensive literature investigates how small, organized interest groups . . . can push through self-interested policy agendas . . . that exploit a much larger but more disorganized and inattentive general public.").

187. See Parchomovsky & Siegelman, *supra* note 16, at 247 (explaining, where prospect of government subsidies is "liable to spark fierce competition for rents among business owners" seeking benefits, "[p]oliticians . . . may also invest time and money to secure concessions and payments from the businesses vying for the government money").

Guided by these virtues, as well as by efficiency considerations, we present in this Part two procedural solutions that would allow intellectual property defendants who raise class and general defenses to enlist the help of other defendants in waging their legal battles. These proposals introduce a voluntary joinder mechanism: The actual defendant would be allowed to implead as codefendants other alleged users of the intellectual property. Impleaded parties would be at liberty to refuse to join. However, the refusal would have one of the two following consequences: (1) defendants declining to join would be precluded from raising the same defense(s) should they be sued in the future, and hence the original defendant's loss would be their loss, too; or, in the alternative, (2) in the event of a favorable court decision, the unallied defendants would have to reimburse the litigating defendant for her expenditures on vindicating the defense.

As we will show, these proposals create a better alignment of private and societal interests with respect to intellectual property rights and go a long way toward leveling the playfield between plaintiffs and defendants in the intellectual property realm. Importantly, our proposed mechanisms are noncoercive; both of our mechanisms permit potential defendants to decide whether or not to join the relevant suit. However, these mechanisms change the payoff associated with not joining.

Permitting voluntary joinder of potential defendants would produce two important benefits.¹⁸⁸ First, it would eliminate free riding and the resulting unfairness to the individual bearer of defense costs. Second, and as importantly, it would dramatically improve the defendants' chances of defeating strike suits filed by the intellectual property owner. The resulting empowerment of weak defendants, in turn, would erode the rightsholders' incentive to file those suits.

188. Cf. Robin J. Effron, *The Shadow Rules of Joinder*, 100 *Geo. L.J.* 759, 814–18 (2012) (contemplating adjustable joinder regime allowing courts to approve addition of any litigant for reasons of fairness and expediency); Miller, *Joint Defense*, *supra* note 156, at 16–23 (arguing plural accused patent infringers should be permitted to form joint defense agreements and positing such agreements align with antitrust law despite old decision suggesting otherwise in *Jones Knitting Corp. v. Morgan*, 244 F. Supp. 235 (E.D. Pa. 1965), *aff'd* in relevant part, 361 F.2d 451 (3d Cir. 1966)). Antitrust law actually permits joint defense agreements so long as they do not impose anticompetitive restraints on primary activities. In *Gould v. Control Laser Corp.*, the court said:

The Third Circuit unanimously sustained the district court's reasoning [in *Jones Knitting*] on the antitrust issue, emphasizing as had the court below that the competing members of the defense group had done more than merely enter into an agreement to challenge the validity of the Morgan patents. A major purpose of the group was to obtain industry-wide agreement to refuse to negotiate with Morgan for licensing and consequently “[t]he freedom of each plaintiff to deal freely with Morgan was restrained by the requirement of giving notice” to all the members of the group.

462 F. Supp. 685, 690 (M.D. Fla. 1978) (second alteration in *Jones Knitting*) (quoting *Jones Knitting*, 361 F.2d at 459).

The implementation of our proposal would remediate another asymmetry: that between the plaintiff's and the defendant's powers to formulate the dispute. Our civil procedure rules privilege the plaintiff by making him "master of his complaint" who decides unilaterally which defendants he will and will not sue.¹⁸⁹ Currently, defendants have no power to add additional defendants whom the plaintiff chose not to sue.¹⁹⁰ The plaintiff alone is in charge of framing the lawsuit. And here, as in other cases in which an individual is granted exclusive power, power corrupts. Plaintiffs' exclusive power to determine the identity of the defendant(s) in any given case creates a real possibility of strategic abuse of defendants. As we have shown in Part II, intellectual property owners may often use this power to target weak defendants who cannot adequately defend themselves against spurious claims of patent, trademark, and copyright infringement or trade secrecy violation. Strategic targeting of defendants often forces them to surrender and settle cases out of court.¹⁹¹

Worse yet, plaintiffs have sole control over the decision whether to settle or not. In appropriate cases, plaintiffs can take advantage of the broad control they have over the litigation process to forego the settlement option and obtain, instead, a court ruling that upholds their intellectual property claims.¹⁹² This option is especially appealing when a plaintiff faces no real opposition from a financially constrained defendant. Obtaining a court ruling is costlier than settling in the short run, but it has the potential to dramatically reduce subsequent enforcement efforts. The victorious plaintiff may leverage the court's ruling by enforcing his rights against other defendants. By securing favorable court opinions, intellectual property owners can shape the legal climate in their

189. See *Caterpillar Inc. v. Williams*, 482 U.S. 386, 392, 395, 398–99 (1987) (attesting plaintiff is master of his complaint); *Garbie v. DaimlerChrysler Corp.*, 211 F.3d 407, 410 (7th Cir. 2000) ("[P]laintiffs as masters of the complaint may include (or omit) . . . parties in order to determine the forum." (citing *Caterpillar Inc.*, 482 U.S. at 392)); *Hughbanks v. Dooley*, 788 F. Supp. 2d 988, 1000 (D.S.D. 2011) ("Because 'a plaintiff is the master of his complaint,' the number of defendants and claims is within [his] control." (quoting *BP Chems. Ltd. v. Jiangsu Sopo Corp.*, 285 F.3d 677, 685 (8th Cir. 2002))); 16 James Wm. Moore, *Moore's Federal Practice* § 107.14[2][c], at 107-100 (3d ed. 2013) ("In general, the plaintiff is the master of the complaint . . . and has the option of naming only those parties the plaintiff chooses to sue, subject only to the rules of joinder . . .").

190. The only exception to this principle is the impleader procedure that allows a defendant to add a claim against any third party obligated to reimburse him, wholly or partially, for the amount he would owe the plaintiff if the court found him liable. Fed. R. Civ. P. 14.

191. See *supra* note 172 and accompanying text (arguing rightsholders strategically file suits against weak defendants to force settlements).

192. See generally Posner, *supra* note 99, at 765 (explaining how precedential value of winning motivates plaintiffs to go to trial instead of settling).

favor and subsequently use their victories to wage legal battle against stronger defendants.¹⁹³

Permitting the joinder of potential defendants may generate important political benefits as well. An actual defendant would naturally seek the “company” of powerful partners when their involvement could be secured.¹⁹⁴ The defendant would therefore implead parties with considerable financial and political clout.¹⁹⁵ The emerging alliances, in turn, may prompt important legislative changes in the domain of intellectual property law. The involvement of large corporations as defendants in real-world cases may lead in the long run to the scaling back of the scope and nature of intellectual property rights, as well as the enactment of legislation that would protect innocent users from strategic abuse by intellectual property holders. For example, Congress could condition the commencement of infringement suits on commercialization and actual use of the intellectual property rights by their holders.¹⁹⁶ In the alternative, Congress could broaden the definition of the misuse doctrine as applied to intellectual property rights or empower courts to order abusive rightsholders to pay punitive damages.¹⁹⁷

As Part II has demonstrated, the invalidation or narrowing down of an intellectual property right owing to the vindication of a valid general or class defense is a desirable outcome not just for the defendant, but also for society at large. When such a defense is successfully asserted, it unlocks welfare-enhancing opportunities not only for the defendant, but also for many other users of the intellectual property who presently do not shoulder the burden of litigating the defense. The willingness of an individual defendant to assert a general or class defense depends on a comparison of the private expected benefits she stands to reap (if successful) and the private cost she stands to bear.¹⁹⁸ The defendant’s

193. Cf. Stephanos Bibas, *Prosecutorial Regulation Versus Prosecutorial Accountability*, 157 U. Pa. L. Rev. 959, 972–73 (2009) (observing prosecutors as repeat players use “other cases as informal precedents in negotiations” to achieve favorable plea bargains).

194. Cf. *supra* text accompanying note 23 (providing example).

195. Presently, the political arena is dominated by firms that own intellectual property and seek to enjoin users. See, e.g., Jonathan Zittrain, *What the Publisher Can Teach the Patient: Intellectual Property and Privacy in an Era of Trusted Privication*, 52 Stan. L. Rev. 1201, 1218 (2000) (attesting entertainment industry has lobbying clout to influence Congress and describing political influence of potential fair users as weak).

196. For an academic proposal that points in this direction, see Ted Sichelman, *Commercializing Patents*, 62 Stan. L. Rev. 341, 400–11 (2010) (suggesting creation of new commercialization patent granted in exchange for commitment to make and sell novel product).

197. See Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1368–71 (arguing courts should have discretion to impose equitable measures and award punitive damages to combat strategic litigants).

198. See Shavell, *Foundations*, *supra* note 171, at 390 (explaining litigants’ cost-benefit calculation).

private calculus does not take into account the broader social benefit from removing invalid intellectual property rights. Hence, per discussion in Part II, defendants would often refrain from litigating general and class defenses in order to secure an outcome that is privately more advantageous.

To better align the interests of private defendants and society as a whole, this Article proposes giving actual defendants the power to form an alliance with other potential defendants. We define potential defendants as those who have arguably infringed the same intellectual property right invoked in the suit against the actual defendant. These potential defendants have not yet been sued, but there is a realistic chance that they will be sued in the future by the same plaintiff. Their legal fate will thus be affected by the success or failure of the defendant who was actually sued.

To allow participation by these defendants, this Part proposes that a defendant who raises a class or general defense be permitted to implead them. Prior to exercising this power, the defendant would have to find out who these potential defendants are. For a defendant asserting a class defense, this search would be confined to her own industry or class of users. The defendant would therefore find it relatively easy to identify potential future defendants. For a defendant who relies on a general defense, the search would be more complicated. Such a defendant would do well to concentrate her search on large companies that are using the underlying patent, trademark, trade secret, or copyright. Impleading those companies would be in the defendant's best interest, as they would be able to commit substantial resources to the joint enterprise. In the case of copyrights and trademarks, use by others should be common knowledge as such use is done openly and publicly. Infringement suits involving patents and especially trade secrets would pose a greater challenge since the activities that constitute infringement often occur away from the public eye and are shrouded by secrecy. Yet, even in these cases, industry participants are likely to know what technologies and know-how their rivals are using or are likely to use in the future. Such general information should enable the defendant to compile a list of potential defendants to implead. Importantly, the search here would likely be bidirectional: Some users of the underlying intellectual property would reach out to the defendant and propose themselves as allies.

The impleaded parties would be given the option to join the defendant's alliance, and if they decided to do so, they would become formal defendants in the suit. The defendant's alliance would then appoint an attorney and establish a fund that would pay for the defendants' common expenditures on the litigation. The defendants would bear the cost of litigating the case in equal parts, unless they agreed among themselves to allocate the cost differently.

A. Preclusion

The impleaded parties would be free to decline the invitation to join the alliance. Refusal, however, would entail a cost. Parties who declined the invitation to join the alliance would be able to benefit from the alliance's success in the litigation and the consequent removal of the intellectual property right. However, declining parties would bear a consequence in the case of failure: We propose to set up a preclusion rule that would bar them from raising any class or general defense in any future litigation that was invoked by the actual defendant(s) unsuccessfully. Parties who were invited to join but chose to decline would thus not be permitted to relitigate a defense that was raised in the case they chose not to join. If the intellectual property owner decided to sue them, they would only be able to raise individualized defenses.

The prospect of not being able to invoke a general or class defense in the event of a suit is likely to prompt prospective defendants to join the alliance. Many such defendants would likely be willing to participate in the collective effort at vindicating a class or general defense.¹⁹⁹

This solution is potentially attractive, but it also has a number of shortcomings. As an initial matter, it is inconsistent with the overall design of the Federal Rules of Civil Procedure. These rules do not allow a defendant to implead additional defendants and force them to share the costs of vindicating the defense.²⁰⁰ Nor do they extend the preclusion bar to nonparties.²⁰¹ Hence, introduction of our solution would require an overhaul of our civil procedure system as it currently stands. Second and more important, applying *res judicata* to parties who decided not to join penalizes not only the parties themselves, but also society at large. When an intellectual property right is invalid, it is in society's interest to have it invalidated. Parties who choose not to join may often be well positioned to achieve this result. Barring them from challenging invalid intellectual property rights would therefore be detrimental to the societal interest. Our second solution, however, avoids both problems. This solution incorporates an opt-out rule that retains the potential defendants' procedural autonomy.

199. Cf. Hsieh, *supra* note 167, at 701–04 (favoring mandatory joinder of defendants).

200. See *supra* note 190 and accompanying text (describing rules making plaintiff “master of his complaint” and exception under Federal Rule of Civil Procedure 14 allowing defendants to add claims against third parties who are obligated to reimburse if found liable).

201. See, e.g., *Smith v. Bayer Corp.*, 131 S. Ct. 2368, 2381 (2011) (declining to accept claim that “flies in the face of the rule against nonparty preclusion [that] perforce leads to relitigation of many issues”); *Ashley v. City of Jackson, Miss.*, 464 U.S. 900, 902 (1983) (Rehnquist, J., dissenting from denial of certiorari) (“It is a fundamental premise of preclusion law that nonparties to a prior action are not bound by the judgment.” (citing *Sea-Land Servs., Inc. v. Gaudet*, 414 U.S. 573, 593 (1974); *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 110 (1969))).

B. *Restitution*

Under our restitution mechanism, parties who receive the defendant's invitation to join the case would be able to decline the invitation penalty-free. These parties would not be precluded from raising a class or general defense in their future litigation against the plaintiff. They would have their day in court with any defense they might decide to raise even if the plaintiff defeated the defendant. However, if the defendant succeeded at vindicating a class or general defense, the unallied parties would have to pay her their fair share of the litigation cost. This mechanism therefore can be characterized as an opt-out rule coupled with a charge for success. In cases of failure, the impleaded parties who opted out would not be obligated to reimburse the defendant.

The "fair share" charge should reflect the unallied party's share in the allied defendants' cost of litigating the defense, as well as a premium for the risk of losing the case taken by those defendants.²⁰² A party who turned down an invitation to join the alliance would be exempt from the compensation duty only if she completely forewent the activity that the alliance unlocked for her. A simple numerical example helps illustrate how our mechanism would work. Assume that Innovative Software Solutions Inc. (ISS) is impleaded to join a patent infringement case together with eight other defendants. ISS does not trust any of these defendants, and it also fears that the stock market would react negatively to its involvement in the case. For these reasons, it decides to decline the invitation. The other defendants successfully invalidate the plaintiff's patent after a long legal battle at a combined cost of \$1,000,000. In this scenario, ISS would have to pay one-ninth of the aggregate cost of defense plus a premium of 50%.²⁰³ The 50% premium represents the statistical base rate in litigation: When one has no specific information about the merits of the parties' claims, the plaintiff and the defendant are deemed to have an equal (50%) chance of winning the case.²⁰⁴ This premium amount also tracks the approximate rate at which patents are invalidated in litigation.²⁰⁵ Of course, if an impleaded party estimates that

202. See *Goldberger v. Integrated Res., Inc.*, 209 F.3d 43 (2d Cir. 2000) (laying down core precedent on "lodestar formula" as accounting for risk taken by class representative in calculating her compensation); see also *McDaniel v. Cnty. of Schenectady*, 595 F.3d 411, 424 (2d Cir. 2010) ("The level of risk associated with litigation . . . is 'perhaps the foremost factor' to be considered in assessing the propriety of a multiplier. . . ." (quoting *Goldberger*, 209 F.3d at 54)).

203. The company's total payment would thus be approximately \$166,667.00: $(\$1,000,000 / 9 = \$111,111 + \$111,111 \times 50\%)$.

204. The 50% assumption here rests on the "principle of indifference" that underlies much of probabilistic calculus. See Alex Stein, *The Flawed Probabilistic Foundation of Law and Economics*, 105 Nw. U. L. Rev. 199, 218–21 (2011) (explaining and illustrating principle of indifference).

205. See *supra* note 17 (citing studies demonstrating approximate 50% invalidation rate in patent litigation).

the defense has a better than 50% chance of succeeding, it can simply join the alliance and avoid paying the premium. If, by contrast, an impleaded party estimates that a general defense stands a very low chance of success—say, only 20%—it will opt out. Recall that under our proposal if a defense fails, impleaded parties who choose to opt out will pay nothing.

Importantly, our proposal harnesses the private information of impleaded parties and is therefore capable of generating a socially desirable separating equilibrium. When a general defense has a high probability of success, impleaded parties have an incentive to join in order to avoid the 50% premium. When a defense has a low probability of success, impleaded parties will prefer to opt out. From a societal perspective, it is better when defendants with meritorious defenses succeed and those who raise phony defenses fail. Critically, our goal is not to invalidate intellectual property rights in general, but only those that should not have existed in the first place.

This reimbursement system tracks the principles of unjust enrichment and restitution. These principles entitle an individual who made a payment on another person's behalf or invested in another person's property to recover from that person equitable reimbursement. This reimbursement entitlement aims at preventing windfalls and at removing obstacles to efficient bargaining.²⁰⁶

In an article that has been written contemporaneously with this one, Roger Ford proposes a solution in the context of patent litigation that bears a resemblance to our restitution mechanism. He suggests that a patent defendant who successfully raises a defense that falls into the category of general defenses be given the power to bring an accounting suit against other parties who used the invalidated patent. These parties would then be obligated to pay the defendant royalties otherwise payable to the patent's holder. By this measure, Ford seeks to empower successful patent defendants to collect the upside of their success from other parties.²⁰⁷ While we are naturally sympathetic to Ford's proposal, we believe that reimbursement for cost, rather than accounting for profits, is the right benchmark. First, as we explained, defendants often face liquidity constraints and thus do not have the financial wherewithal to mount an effective defense.²⁰⁸ Hence, it is important to empower them to enlist early on the help of other parties. The prospect of collecting profits at the end of the process might not suffice to prompt defendants to engage in costly and prolonged legal battles. Second, the profits of

206. See Posner, *supra* note 99, at 168–69 (analyzing transaction costs within the context of unjust enrichment and restitution).

207. Ford proposes two additional measures: alleviating defendants' burden of proving invalidity and allowing them to bifurcate the trial and have the invalidity claim adjudicated first. See Ford, *supra* note 69 (manuscript at 49–53).

208. See *supra* notes 172–173 and accompanying text (discussing defendants' cost-and-benefit considerations in intellectual property infringement cases).

other parties are notoriously difficult to prove.²⁰⁹ The determination of the profit amounts might lead to expensive satellite litigation that would significantly erode the amounts ultimately collected by successful plaintiffs. Third, a very large percentage of all patented inventions are never commercialized.²¹⁰ This means that in many cases there will simply not be any profits to collect.

C. The Effect of the Proposed Reform on Out-of-Court Settlements

It must be borne in mind that most cases involving claims of intellectual property violations never reach the court. A burgeoning literature points to a growing number of intellectual property rightsholders who take advantage of asymmetrical litigation costs to extract out-of-court settlements from users.²¹¹ Claims asserted by the rightsholders are often frivolous.²¹² However, due to the cost of the legal process, many defendants find it more economical to settle than to litigate. The rightsholders, as repeat players, enjoy economies of scope and scale that most defendants lack. Large patent, copyright, and trademark owners—and, to a lesser degree, trade secret holders—can take advantage of the disparity in litigation costs to extract payments from infringing and noninfringing users, without taking the case to court. Worse yet, large rightsholders can employ this strategy even when their claims lack merit.²¹³

As an illustration, consider a small neighborhood restaurant that receives a letter from McDonald's Corporation alleging the tarnishing of one of McDonald's trademarks and demanding payment of \$6,000. The small business proprietors believe that the claim is spurious, as the mark invoked by McDonald's does not qualify as famous and thus does not

209. See E. Allan Farnsworth, *Your Loss or My Gain? The Dilemma of the Disgorgement Principle in Breach of Contract*, 94 *Yale L.J.* 1339, 1350 & n.31 (1985) (attesting accounting for profits for purposes of disgorgement is uncertain, complicated, lengthy, and expensive procedure); see also *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 505 (1964) (acknowledging Patent Act's substitution of injunctive relief for profit accounting and commending its simplicity).

210. See Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 *Nw. U. L. Rev.* 1495, 1507 (2001) ("[T]he total number of patents litigated or licensed for a royalty (as opposed to a cross-license) is on the order of five percent of issued patents.").

211. See James Bessen & Michael J. Meurer, *Lessons for Patent Policy from Empirical Research on Patent Litigation*, 9 *Lewis & Clark L. Rev.* 1, 14 (2005) ("[P]art of the private value created by patents arises from strategic patent litigation. . . . First, firms use patents to ward off patent suits by . . . competitors. Second, dominant firms threaten or file predatory patent suits against smaller . . . competitors. Third, firms threaten or file opportunistic patent suits to earn nuisance settlement payments."); Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1345–52 (describing asymmetric litigation costs in copyright, patent, and trademark cases).

212. See Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1345–52 (illustrating and discussing strategic litigation abuse in intellectual property context).

213. *Id.* at 1345 (demonstrating via hypothetical how defendants are forced to settle illegitimate claims).

qualify for protection against dilution.²¹⁴ However, on the very realistic assumption that it would cost the small business at least \$15,000 to hire legal representation and litigate the case, the business may well settle the claim to avoid litigation. The same economic logic drives the decision-making process of users of expressive works and inventions who are faced with the “litigate or settle” dilemma. As Professor James Gibson demonstrated, the decision of individual users to surrender without a fight results in an ever-growing expansion in the scope of rights of intellectual property owners and in the erosion of users’ privileges.²¹⁵

The expansion of rights via out-of-court settlements is undesirable from a societal perspective. Yet, few defendants can afford to incur the much higher cost of litigating and standing for principle, while plaintiffs who sue them are repeat players litigating at a discounted fee.²¹⁶ Moreover, as already explained, these defendants can be readily identified and passed over by rightsholders. Under the current legal regime, not much can stop rightsholders from employing a legal “divide and conquer” strategy.

Enter our proposals. Implementation of either one of them would dramatically change the balance of power between rightsholders and users. The ability to implead other defendants under the preclusion mechanism, or to collect their contributions in the case of success under the restitution mechanism, would remediate the baseline disparity in the litigation costs between plaintiffs and defendants. Realizing this, rightsholders would be much less inclined to engage in the scare tactics against individual users and cash-strapped corporations that they employ today.

Implementation of either one of our proposals would lead to a much transformed legal reality in which meritorious claims would be asserted and prosecuted, whereas frivolous ones would not be pursued. We estimate, therefore, that adoption of our proposals would result in a substantial decline in the number of patent, copyright, and trademark trolls and in a serious downsizing of the cottage industry of cease and desist letters.²¹⁷

214. See *supra* notes 133–140 and accompanying text (explaining trademark protection against threat of dilution).

215. James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 *Yale L.J.* 882, 884–86 (2007).

216. See Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1345–52.

217. For discussions of litigation abuse in intellectual property, see Benjamin J. Bradford & Sandra J. Durkin, *A Proposal for Mandatory Patent Reexaminations*, 52 *IDEA* 135, 136–37, 142–45 (2012) (documenting massive litigation abuse by patent trolls); Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 *Cornell L. Rev.* 1, 2 (2012) (describing patent trolls’ business model as “using the threat of an injunction to reach a favorable settlement with the defendant”); Leah Chan Grinvald, *Shaming Trademark Bullies*, 2011 *Wis. L. Rev.* 625, 628 (“Large corporations send out multitudes of letters demanding small businesses . . . [to] cease and desist in their use of a

Equally important, these mechanisms would practically eliminate an individual defendant's opportunity to strike a collusive settlement agreement with the owner of the challenged intellectual property right. The defendants' coalition would prevent individual dealings while maintaining collective bargaining with the plaintiff. The defendants would always decide collectively whether to accept or reject the plaintiff's settlement offer. An individual defendant consequently would feel less pressure to settle and would be unable to benefit herself at the expense of other defendants by striking a one-sided settlement with the plaintiff. Her opportunity for striking a separate settlement would exist for a very short period of time: after receiving the plaintiff's complaint and before asking other defendants to join in. During that period, the defendant would not have much to offer the plaintiff; she would only be able to give up her own defense, allowing the plaintiff to prevail against her. This, however, would give very little to the plaintiff who has yet to fight a legal battle against a strong coalition of other defense holders.

IV. OBJECTIONS

Our proposed mechanisms are not cost free. Empowerment of defendants would change their bargaining power vis-à-vis plaintiffs. For a number of reasons, this shift in the balance of powers may not always work to society's benefit. First and most important, the defendants' alliances may prove too formidable. By reducing their collective expenditure on the trial, the allied defendants may become able to overpower deserving owners of intellectual property in the settlement arena and in court.²¹⁸ Second, one might argue that the spillover problem we are trying to resolve is not really a problem but rather a normal—and hence tolerable—consequence of paving the path of the law.²¹⁹ Arguably, the spillover dynamic here is analogous to a precedent-creation framework within which one litigant benefits many without asking anything in return. Last, there may be conflicts of interest between the allied defend-

trademark These letters seem intended to simply intimidate the small business or individual into forgoing the use and/or registration of their trademark." (footnotes omitted)); Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1345–52 (explaining ways firms with large economies of scale gain litigation advantage against smaller defendants who bear greater litigation costs). Remarkably, the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284, 332–33 (2011) (to be codified as amended at 35 U.S.C.), curbs litigation abuse by patent holders by restricting their ability to sue multiple defendants in a single action. For thorough analysis of this legislation, see generally David O. Taylor, *Patent Misjoinder*, 88 N.Y.U. L. Rev. 652 (2013). We approach the problem from the other end: Our proposals seek to empower meritorious defendants instead of disempowering strategic plaintiffs.

218. See Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1341 (noting parties with comparatively lower litigation costs can dominate litigation and overpower opponents regardless of merits by extracting favorable settlements).

219. Cf. Oliver W. Holmes, Jr., *The Path of the Law*, 10 Harv. L. Rev. 457, 457–64 (1897) (coining "path of the law" metaphor).

ants. Multiple defendants might form conflicting views about the most desirable trial strategy and agreeable settlements. As a result, fewer cases would settle and there would be a greater number of costly trials.

We now move to consider these objections in the order presented.

A. Imbalance of Powers

Admittedly, the defense holders' opposition might turn out to be too strong: It might be able to defeat a deserving plaintiff or force her into a settlement that obliterates her intellectual property right. This prospect does not reflect the existing balance of power between owners and users of intellectual property.²²⁰ This prospect, however, is not unrealistic either and, therefore, should be considered.

Regular civil procedure mechanisms can likely fend off spurious defenses, whose only purpose is to put pressure on the intellectual property owner and force her into an extortionary settlement. The most potent of those mechanisms are fee shifting and other sanctions under Rule 11 of the Federal Rules of Civil Procedure. This rule authorizes the court to obligate a defendant whose defense was found to be frivolous or extortionary to pay the plaintiff her attorney's fee.²²¹ Another mechanism is the burden of proof doctrine that normally requires a defendant to prove his defense against the suit by a preponderance of the evidence²²² and, sometimes, by clear and convincing evidence.²²³ This requirement extends to most defenses that can be raised against suits that allege a copyright, patent, or trademark violation.²²⁴ While trying to satisfy this requirement, the defendants' coalition would face the owner of the intellectual property who stands to capture the full amount of her success in court. Unlike defendants who raise general or class defenses, this owner would be fully determined to protect her entitlement and properly invest

220. Parchomovsky & Stein, *Relational Contingency*, *supra* note 19, at 1345–52 (showing how owners of patents, trademarks, and copyrights utilize economies of scale and scope to force users to surrender without legal battle).

221. Fed. R. Civ. P. 11.

222. E.g., Christopher B. Mueller & Laird C. Kirkpatrick, *Evidence* § 3.3, at 111 (5th ed. 2012) (attesting affirmative defenses generally must be proven by defendant by preponderance of evidence).

223. See *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011) (holding patent's invalidity must be proven by clear and convincing evidence).

224. See, e.g., Lee Ann W. Lockridge, *When Is a Use in Commerce a Noncommercial Use?*, 37 Fla. St. U. L. Rev. 337, 377 n.207 (2010) (“[B]ased on the overall statutory structure and the logical allocation of the burden of proof, noncommercial use is an affirmative defense and should be treated as such.”); Irina Oberman, *Maintaining the Clear and Convincing Evidence Standard for Patent Invalidity Challenges in Microsoft Corp. v. i4i Limited Partnership*, 131 S. Ct. 2238 (2011), 35 Harv. J.L. & Pub. Pol’y 439, 446 (2012) (attesting courts impose heightened burden of proof upon challengers of patents’ validity); Maureen A. O’Rourke, *Toward a Doctrine of Fair Use in Patent Law*, 100 Colum. L. Rev. 1177, 1209 (2000) (“[F]air use would be an equitable and affirmative defense with the burden of proof on the infringer.”).

in the court proceedings. Oftentimes, the economic value of the owner's intellectual asset would also be high enough to attract investors who would contribute to the owner's litigation effort. Therefore, courts can protect deserving owners of intellectual property against unmeritorious challenges by defendants' coalitions.²²⁵

B. *The Precedent Formation Analogy*

Another objection to our proposal analogizes the collective action problem that the proposal resolves to the precedent formation process. This process often involves a single actor who incurs substantial litigation expenses to obtain a favorable ruling on a legal issue from a state's highest court or from the United States Supreme Court. The actor's success in that endeavor benefits many individuals and firms not participating in paying her expenses. Arguably, these spillovers are byproducts of the litigation process that creates legal precedent.²²⁶ If this observation is correct, what separates an actor who works to create a general legal precedent from an actor who unlocks a general or class defense against a patent, copyright, or trademark infringement claim?

At first glance, the endeavors of the two actors appear identical. Both actors produce social benefits that will be enjoyed by nonpaying strangers. As a self-interest maximizer, each actor will consequently be willing to sacrifice the uncaptured social benefit for her private gain. This motivation, however, is not self-fulfilling; to realize it, the actor must have an opportunity to advance her interest by foregoing the production of the benefit she cannot capture. As articulated in Part II, this opportunity looms large in litigation over general (and class) intellectual property defenses. In intellectual property litigation, defendants often have a financial incentive to forfeit their defenses and agree to a settlement or a court verdict that reaffirms the plaintiff's intellectual property entitlement.

The precedent formation process does not give private actors the same opportunity for self-enrichment. The reason is simple: Private litigants cannot shape legal precedent by striking a collusive agreement between themselves.²²⁷ The legal system views precedent as a social good

225. We acknowledge the possibility of an extreme scenario in which large corporations join forces to attack valid intellectual property rights. Large corporations, however, can accomplish their litigation goals without relying on our preclusion and restitution mechanisms. Furthermore, a large corporation would often be better off striking a mutually beneficial deal with the intellectual property owner instead of challenging her entitlement in court.

226. See Posner, *supra* note 99, at 745 (explaining social value of precedents).

227. See *U.S. Bancorp Mortg. Co. v. Bonner Mall P'ship*, 513 U.S. 18, 26-27 (1994) (stating judgment is not vacated simply when parties settle case instead of pursuing appeal).

that private litigants do not own.²²⁸ Driven by this vision, courts try to establish precedents that promote society's interest. To achieve this result, they consult academic writings, social science evidence, and amicus briefs that come from different interest groups.²²⁹ This integrative mode of decisionmaking dilutes the relative advantage that well-to-do litigants would otherwise have.²³⁰

Importantly, not all scholars are sanguine about the precedent production process. Some of them believe that precedents are underproduced.²³¹ Furthermore, Marc Galanter's classic work showed that precedent production is often dominated by affluent litigants, who shape precedents the way they want.²³² An equally important work by Steven Shavell identified a systematic misalignment between litigants' private incentives and social good.²³³ This misalignment engenders distortions in the precedent formation process. Self-interested parties, unconcerned by the long-term impact of judge-made law, concentrate litigation efforts on issues that affect them individually; this allows affluent litigants more interested in precedent formation to seize the playfield and exert one-sided influence on court decisions.²³⁴

Extending the proposed mechanisms beyond the realm of intellectual property defenses can attenuate this problem. These mechanisms

228. See *Izumi Seimitsu Kogyo Kabushiki Kaisha v. U.S. Philips Corp.*, 510 U.S. 27, 40 (1993) (Stevens, J., dissenting), cited with approval in *Bancorp Mortg.*, 513 U.S. at 26–27 (“Judicial precedents are presumptively correct and valuable to the legal community as a whole. They are not merely the property of private litigants and should stand unless a court concludes that the public interest would be served by a vacatur.”).

229. For a classic account, see John Monahan & Laurens Walker, Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law, 134 U. Pa. L. Rev. 477 (1986) (explaining development of social science research as form of authority in judicial opinions); see also Ruben J. Garcia, A Democratic Theory of Amicus Advocacy, 35 Fla. St. U. L. Rev. 315, 339–40 (2008) (noting importance of amicus briefs).

230. Alas, it does not completely eliminate this advantage.

231. See, e.g., David Luban, Settlements and the Erosion of the Public Realm, 83 Geo. L.J. 2619, 2623 (1995) (noting precedent production involves positive externality and free rider problems and private parties consequently have inadequate incentive to create precedent); Richard H. McAdams, The Expressive Power of Adjudication, 2005 U. Ill. L. Rev. 1043, 1114 (observing private parties have “insufficient incentive to care about the precedential effect on future disputes in which they are not participants”); Michael P. Van Alstine, The Costs of Legal Change, 49 UCLA L. Rev. 789, 819 n.150 (2002) (“[T]he legal system requires the parties to bear their own litigation costs, but . . . not . . . to internalize the resulting learning benefits. . . . [T]he existing system may create insufficient incentives for an optimal amount of judicial precedent on newly created legal norms.”).

232. See Marc Galanter, Why the “Haves” Come Out Ahead: Speculations on the Limits of Legal Change, 9 Law & Soc’y Rev. 95, 97–102 (1974) (explaining how well-to-do parties prevail in litigating content of legal rules).

233. See Steven Shavell, The Fundamental Divergence Between the Private and the Social Motive to Use the Legal System, 26 J. Legal Stud. 575, 577–79 (1997) (discussing misalignments between private and social incentives in litigation).

234. See Galanter, *supra* note 232, at 101–04 (showing how affluent litigants dominate courts’ rulemaking).

are not uniquely suitable for advancement of intellectual property defenses. Rather, they can address a wide variety of collective action problems that threaten to distort the path of the law.

C. Defendants' Conflicts of Interest

At times, allied defendants will find it difficult to agree about their litigation strategy. When this happens, the defendants' attorney will be forced to engage in comprehensive trial warfare instead of settling the dispute. The consequent prevalence of protracted litigation is bound to produce inefficiencies.

This concern is real. Admittedly, allowing the holders of intellectual property defenses to form alliances might create a collective action problem within those alliances.²³⁵ This problem might at times prevent the defendants from reaching a collective decision. Consequently, the defendants would be unable to reach a settlement agreement with the plaintiff. The resulting impasse would make trial, as opposed to a settlement, a rule of choice for the defendants' attorney. As a result, some potentially welfare-enhancing settlements would not be consummated.

While we acknowledge this prospect, the projected increase in expensive trials is arguably not detrimental to society. While this increase is not what a welfare-driven legal system should hope for, it is much better than the alternative. As shown in Part II, the defendants' failure to form an alliance would create an acute problem of collective inaction—a vulnerability that would allow intellectual property owners to target weak defendants and drive them into settlements that effectively obliterate the defense. Contrary to the famous adage, these bad settlements are not better than a good trial.²³⁶ Some of those settlements effectively force the individual defendant to surrender and not to challenge the owner's intellectual property asset. Other settlements give the defendant a privately beneficial deal in exchange for her abandonment of a valid defense that could unlock socially valuable endeavors.

CONCLUSION

Defenses are generally perceived as exemptions from liability that the law would otherwise impose. By successfully asserting a defense, a person avoids the normal consequences of the applicable liability rule, civil or criminal. This rule-exception format fosters an individualized view of defenses. According to this view, whether a defense is available or

235. Cf. John C. Coffee, Jr., *Class Action Accountability: Reconciling Exit, Voice, and Loyalty in Representative Litigation*, 100 Colum. L. Rev. 370, 398 (2000) (observing fragmented alliances of plaintiffs may be unmanageable).

236. Cf. *Strong v. BellSouth Telecomms., Inc.*, 173 F.R.D. 167, 172 (W.D. La. 1997) ("In this case, I could hold my nose and accept the [suspicious class action] settlement, after all, it is said that a bad settlement is better than a good trial.").

not matters only to the person who raises it and to the plaintiff or the prosecutor who initiated legal proceedings against that person. Against this widely held view, this Article offered an analytical framework demonstrating that not all defenses are created equal. Our analysis of intellectual property law reveals that individualized defenses occupy only a part of the legal landscape. Other provinces are occupied by class and general defenses. A defendant who successfully invokes a class or general defense in response to an infringement claim provides a valuable service to multiple other parties. In the case of a class defense, the benefit accrues to an entire class of people who engage in a similar trade or activity. In the case of a general defense, the benefit flows to society as a whole. In both cases, the defendant relieves parties who were not yet sued by the intellectual property rightsholder of the duty to conform to the underlying right. The economic value of activities she thereby unlocks far exceeds her personal gain. Hence, society has a special interest in the vindication of class and general defenses. In light of this fact, one would have expected the legal system to support defendants who wish to raise such defenses as they act as agents for society as whole. At present, however, no support is forthcoming; individual defendants are left alone "to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."²³⁷

One way to alleviate this problem is by allowing defendants to join forces with other potential defendants, so they can mount a more effective legal campaign together. To this end, we proposed two innovative procedural tools—preclusion and restitution—whose implementation would lead to far more equitable and efficient distribution of the costs and benefits associated with our intellectual property regime. There is a broader policy lesson here, however. Intellectual property policy analysis must not be confined to the rights side of the equation. The defenses side deserves as much attention. Currently, there exists voluminous scholarship on the benefits and costs associated with intellectual property rights. The time has come to develop a more comprehensive understanding of the costs and benefits of intellectual property defenses.

237. *Armstrong v. United States*, 364 U.S. 40, 49 (1960) (pronouncing in context of Fifth Amendment's Takings Clause).

SELECTED BIBLIOGRAPHY

- Allison, John R., Mark A. Lemley & Joshua Walker, Patent Quality and Settlement Among Repeat Patent Litigants, 99 *Geo. L.J.* 677 (2011).
- Axelrod, Robert, *The Evolution of Cooperation* (rev. ed. 2006).
- Balganesh, Shyamkrishna, "Hot News": The Enduring Myth of Property in News, 111 *Colum. L. Rev.* 419 (2011).
- Baumol, William J., On Taxation and the Control of Externalities, 62 *Am. Econ. Rev.* 307 (1972).
- Beebe, Barton, An Empirical Study of the Multifactor Tests for Trademark Infringement, 94 *Calif. L. Rev.* 1581 (2006).
- Beebe, Barton, Search and Persuasion in Trademark Law, 103 *Mich. L. Rev.* 2020 (2005).
- Bell, Abraham & Gideon Parchomovsky, Of Property and Antiproperty, 102 *Mich. L. Rev.* 1 (2003).
- Benkler, Yochai, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (2006).
- Bernstein, Gaia, In the Shadow of Innovation, 31 *Cardozo L. Rev.* 2257 (2010).
- Bessen, James & Michael J. Meurer, Lessons for Patent Policy from Empirical Research on Patent Litigation, 9 *Lewis & Clark L. Rev.* 1 (2005).
- Bibas, Stephanos, Prosecutorial Regulation Versus Prosecutorial Accountability, 157 *U. Pa. L. Rev.* 959 (2009).
- Boldrin, Michele & David K. Levine, The Case Against Patents, *J. Econ. Persp.*, Winter 2013, at 3.
- Bradford, Benjamin J. & Sandra J. Durkin, A Proposal for Mandatory Patent Reexaminations, 52 *IDEA* 135 (2012).
- Buccafusco, Christopher & Christopher Jon Sprigman, The Creativity Effect, 78 *U. Chi. L. Rev.* 31 (2011).
- Chien, Colleen V. & Mark A. Lemley, Patent Holdup, the ITC, and the Public Interest, 98 *Cornell L. Rev.* 1 (2012).
- Coase, R.H., The Problem of Social Cost, 3 *J.L. & Econ.* 1 (1960).

- Coffee, John C., Jr., Class Action Accountability: Reconciling Exit, Voice, and Loyalty in Representative Litigation, 100 Colum. L. Rev. 370 (2000).
- Cohen, Adam, Securing Trade Secrets in the Information Age: Upgrading the Economic Espionage Act After *United States v. Aleynikov*, 30 Yale J. on Reg. 189 (2013).
- Cotter, Thomas F., Misuse, 44 Hous. L. Rev. 901 (2007).
- Demsetz, Harold, Toward a Theory of Property Rights, 57 Am. Econ. Rev. 347 (1967).
- Depoorter, Ben, The Upside of Losing, 113 Colum. L. Rev. 817 (2013).
- Desai, Deven R. & Sandra L. Rierison, Confronting the Genericism Conundrum, 28 Cardozo L. Rev. 1789 (2007).
- Dogan, Stacey L. & Mark A. Lemley, A Search-Costs Theory of Limiting Doctrines in Trademark Law, 97 Trademark Rep. 1223 (2007).
- Dogan, Stacey L. & Mark A. Lemley, The Trademark Use Requirement in Dilution Cases, 24 Santa Clara Computer & High Tech. L.J. 541 (2008).
- Dole, Richard F., Jr., The Uniform Trade Secrets Act—Trends and Prospects, 33 Hamline L. Rev. 409 (2010).
- Effron, Robin J., The Shadow Rules of Joinder, 100 Geo. L.J. 759 (2012).
- Eisenberg, Rebecca S., Patent Costs and Unlicensed Use of Patented Inventions, 78 U. Chi. L. Rev. 53 (2011).
- Eisenberg, Rebecca S., Patents and the Progress of Science: Exclusive Rights and Experimental Use, 56 U. Chi. L. Rev. 1017 (1989).
- Ewing, Tom & Robin Feldman, The Giants Among Us, Stan. Tech. L. Rev., Jan. 9, 2012, at 1, <http://stlr.stanford.edu/pdf/feldman-giants-among-us.pdf>.
- Farnsworth, E. Allan, Your Loss or My Gain? The Dilemma of the Disgorgement Principle in Breach of Contract, 94 Yale L.J. 1339 (1985).
- Farrell, Joseph & Robert P. Merges, Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help, 19 Berkeley Tech. L.J. 943 (2004).

- Ford, Roger A., Patent Invalidity Versus Noninfringement, 99 Cornell L. Rev. (forthcoming 2013), available at <http://ssrn.com/abstract=2256207>.
- Frischmann, Brett M. & Mark A. Lemley, Spillovers, 107 Colum. L. Rev. 257 (2007).
- Fromer, Jeanne C., Claiming Intellectual Property, 76 U. Chi. L. Rev. 719 (2009).
- Galanter, Marc, Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change, 9 Law & Soc'y Rev. 95 (1974).
- Garcia, Ruben J., A Democratic Theory of Amicus Advocacy, 35 Fla. St. U. L. Rev. 315 (2008).
- Gibson, James, Risk Aversion and Rights Accretion in Intellectual Property Law, 116 Yale L.J. 882 (2007).
- Golden, John M., Patentable Subject Matter and Institutional Choice, 89 Tex. L. Rev. 1041 (2011).
- Gordon, Wendy J., Toward a Jurisprudence of Benefits: The Norms of Copyright and the Problem of Private Censorship, 57 U. Chi. L. Rev. 1009 (1990).
- Grinvald, Leah Chan, Shaming Trademark Bullies, 2011 Wis. L. Rev. 625.
- Hamdani, Assaf & Alon Klement, The Class Defense, 93 Calif. L. Rev. 685 (2005).
- Hohfeld, Welsey Newcomb, Fundamental Legal Conceptions as Applied in Judicial Reasoning, 26 Yale L.J. 710 (1917).
- Holmes, Oliver W., Jr., The Path of the Law, 10 Harv. L. Rev. 457 (1897).
- Hsieh, Edward, Note, Mandatory Joinder: An Indirect Method for Improving Patent Quality, 77 S. Cal. L. Rev. 683 (2004).
- Kamar, Ehud, A Regulatory Competition Theory of Indeterminacy in Corporate Law, 98 Colum. L. Rev. 1908 (1998).
- Kapczynski, Amy, The Access to Knowledge Mobilization and the New Politics of Intellectual Property, 117 Yale L.J. 804 (2008).
- Kelly, Daniel B., Strategic Spillovers, 111 Colum. L. Rev. 1641 (2011).
- Kesan, Jay P., Carrots and Sticks to Create a Better Patent System, 17 Berkeley Tech. L.J. 763 (2002).

- Kesan, Jay P. & Andres A. Gallo, Why “Bad” Patents Survive in the Market and How Should We Change?—The Private and Social Costs of Patents, 55 *Emory L.J.* 61 (2006).
- Kurtz, Leslie A., Copyright: The Scenes a Faire Doctrine, 41 *Fla. L. Rev.* 79 (1989).
- Lemley, Mark A., Contracting Around Liability Rules, 100 *Calif. L. Rev.* 463 (2012).
- Lemley, Mark A., Rational Ignorance at the Patent Office, 95 *Nw. U. L. Rev.* 1495 (2001).
- Lemley, Mark A., Should Patent Infringement Require Proof of Copying?, 105 *Mich. L. Rev.* 1525 (2007).
- Lessig, Lawrence, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (2004).
- Lockridge, Lee Ann W., When Is a Use in Commerce a Noncommercial Use?, 37 *Fla. St. U. L. Rev.* 337 (2010).
- Long, Clarisa, Dilution, 106 *Colum. L. Rev.* 1029 (2006).
- Long, Clarisa, Information Costs in Patent and Copyright, 90 *Va. L. Rev.* 465 (2004).
- Long, Clarisa, Patent Signals, 69 *U. Chi. L. Rev.* 625 (2002).
- Luban, David, Settlements and the Erosion of the Public Realm, 83 *Geo. L.J.* 2619 (1995).
- Malani, Anup & Jonathan S. Masur, Raising the Stakes in Patent Cases, 101 *Geo. L.J.* 637 (2013).
- Mankiw, N. Gregory, *Principles of Economics* (6th ed. 2012).
- Mazzone, Jason, *Copyfraud and Other Abuses of Intellectual Property Law* (2011).
- McAdams, Richard H., The Expressive Power of Adjudication, 2005 *U. Ill. L. Rev.* 1043.
- McCarthy, J. Thomas, *McCarthy on Trademarks and Unfair Competition* vol. 1 (4th ed. 2011).
- Menell, Peter S., Promoting Patent Claim Clarity (UC Berkeley Pub. Law Research Paper No. 2171287, 2012), available at <http://ssrn.com/abstract=2171287>.

- Merges, Robert P., A Brief Note on Blocking Patents and Reverse Equivalents: Biotechnology as an Example, 73 J. Pat. & Trademark Off. Soc'y 878 (1991).
- Merges, Robert P., Justifying Intellectual Property (2011).
- Merges, Robert P., et al., Intellectual Property in the New Technological Age (6th ed. 2012).
- Meurer, Michael J., Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation, 44 B.C. L. Rev. 509 (2003).
- Miller, Joseph Scott, Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents, 19 Berkeley Tech. L.J. 667 (2004).
- Miller, Joseph Scott, Joint Defense or Research Joint Venture? Reassessing the Patent-Challenge-Bloc's Antitrust Status, Stan. Tech. L. Rev. Mar. 30, 2011, at 3, <http://stlr.stanford.edu/pdf/miller-joint-defense.pdf>.
- Monahan, John & Laurens Walker, Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law, 134 U. Pa. L. Rev. 477 (1986).
- Moore, James Wm., et al., Moore's Federal Practice vol. 16 (3d ed. 2013).
- Mueller, Christopher B. & Laird C. Kirkpatrick, Evidence (5th ed. 2012).
- Nimmer, David, An Odyssey Through Copyright's Vicarious Defenses, 73 N.Y.U. L. Rev. 162 (1998).
- Noh, Brian, Note, Fair Copyright Litigation: The Reverse Class Action Lawsuit, 9 Hastings Bus. L.J. 123 (2012).
- Oberman, Irina, Maintaining the Clear and Convincing Evidence Standard for Patent Invalidity Challenges in *Microsoft Corp. v. i4i Limited Partnership*, 131 S. Ct. 2238 (2011), 35 Harv. J.L. & Pub. Pol'y 439 (2012).
- Olson, Mancur, The Logic of Collective Action: Public Goods and the Theory of Groups (2d ed. 1971).
- O'Rourke, Maureen A., Toward a Doctrine of Fair Use in Patent Law, 100 Colum. L. Rev. 1177 (2000).
- Parchomovsky, Gideon & Kevin A. Goldman, Fair Use Harbors, 93 Va. L. Rev. 1483 (2007).

- Parchomovsky, Gideon & Peter Siegelman, Cities, Property, and Positive Externalities, 54 Wm. & Mary L. Rev. 211 (2012).
- Parchomovsky, Gideon & Alex Stein, The Relational Contingency of Rights, 98 Va. L. Rev. 1313 (2012).
- Pasour, E.C., Jr., Pigou, Coase, Common Law, and Environmental Policy: Implications of the Calculation Debate, 87 Pub. Choice 243 (1996).
- Perzanowski, Aaron & Jason Schultz, Copyright Exhaustion and the Personal Use Dilemma, 96 Minn. L. Rev. 2067 (2012).
- Pigou, A.C., *The Economics of Welfare* (4th ed. 1932).
- Posner, Richard A., *Economic Analysis of Law* (8th ed. 2011).
- Reder, Margo E.K. & Christine Neylon O'Brien, Managing the Risk of Trade Secret Loss Due to Job Mobility in an Innovation Economy with the Theory of Inevitable Disclosure, 12 J. High Tech. L. 373 (2012).
- Samuels, Edward, The Public Domain in Copyright Law, 41 J. Copyright Soc'y U.S.A. 137 (1993).
- Samuelson, Pamela, Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised, 14 Berkeley Tech. L.J. 519 (1999).
- Samuelson, Pamela, Is Copyright Reform Possible?, 126 Harv. L. Rev. 740 (2013) (reviewing Jason Mazzone, *Copyfraud and Other Abuses of Intellectual Property Law* (2011)).
- Samuelson, Pamela & Suzanne Scotchmer, The Law and Economics of Reverse Engineering, 111 Yale L.J. 1575 (2002).
- Saunders, Kurt M., The Law and Ethics of Trade Secrets: A Case Study, 42 Cal. W. L. Rev. 209 (2006).
- Shapiro, Carl, Patent System Reform: Economic Analysis and Critique, 19 Berkeley Tech. L.J. 1017 (2004).
- Shavell, Steven, *Foundations of Economic Analysis of Law* (2004).
- Shavell, Steven, The Fundamental Divergence Between the Private and the Social Motive to Use the Legal System, 26 J. Legal Stud. 575 (1997).
- Sichelman, Ted, Commercializing Patents, 62 Stan. L. Rev. 341 (2010).

- Smith, Henry E., Intellectual Property as Property: Delineating Entitlements in Information, 116 Yale L.J. 1742 (2007).
- Stein, Alex, The Flawed Probabilistic Foundation of Law and Economics, 105 Nw. U. L. Rev. 199 (2011).
- Stout, Lynn A., Uncertainty, Dangerous Optimism, and Speculation: An Inquiry into Some Limits of Democratic Governance, 97 Cornell L. Rev. 1177 (2012).
- Sumida, Matthew K.K., Comment, Defendant Class Actions and Patent Infringement Litigation, 58 UCLA L. Rev. 843 (2011).
- Sykes, Alan O., The Questionable Case for Subsidies Regulation: A Comparative Perspective, 2 J. Legal Analysis 473 (2010).
- Taylor, David O., Patent Misjoinder, 88 N.Y.U. L. Rev. 652 (2013).
- Thomas, John R., Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties, 2001 U. Ill. L. Rev. 305.
- Tushnet, Rebecca, Worth a Thousand Words: The Images of Copyright, 125 Harv. L. Rev. 683 (2012).
- Van Alstine, Michael P., The Costs of Legal Change, 49 UCLA L. Rev. 789 (2002).
- Vermont, Samson, Independent Invention as a Defense to Patent Infringement, 105 Mich. L. Rev. 475 (2006).
- Wagner, R. Polk, Information Wants to Be Free: Intellectual Property and the Mythologies of Control, 103 Colum. L. Rev. 995 (2003).
- Walters, Radiance A., Partial Forfeiture: The Best Compromise in Trademark Licensing Protocol, 91 J. Pat. & Trademark Off. Soc'y 126 (2009).
- Weder, Rolf & Herbert G. Grubel, The New Growth Theory and Coasean Economics: Institutions to Capture Externalities, 129 Rev. World Econ. 488 (1993).
- Weinreb, Lloyd L., Fair's Fair: A Comment on the Fair Use Doctrine, 103 Harv. L. Rev. 1137 (1990).
- Zittrain, Jonathan, What the Publisher Can Teach the Patient: Intellectual Property and Privacy in an Era of Trusted Privication, 52 Stan. L. Rev. 1201 (2000).