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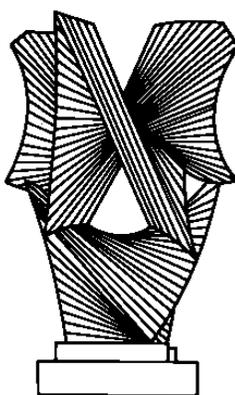
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How the Law Responds to Self-Help

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How the Law Responds to Self-Help

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Legal rules are typically implemented through a combination of public and private mechanisms. Burglars, for example, are deterred from unauthorized entry in part by the threat of jail time and police intervention, and in part by the knowledge that homeowners have guns, security systems, and other private measures by which to defend their property. Similarly, while entrepreneurs obviously use patent, copyright, and trade secret law to protect proprietary information, they also routinely take matters into their own hands by, for example, dividing sensitive information across employees such that no single employee ever knows enough to betray the firm completely. Every area of law can to some degree be characterized in this manner, framed in a way that emphasizes substitutability between public responses and their private alternatives. In this Essay, I examine several specific areas of law from this perspective, using each as a case study from which to cull broader lessons about the proper structure for these public/private partnerships.

I begin in Part I with examples relating to the first amendment. Because of the first amendment, courts evaluating free speech restrictions strongly favor private mechanisms over public ones. Indeed, government speech restrictions are often held unconstitutional on the specific ground that the government failed to

* Professor of Law, The University of Chicago. This Essay is based on my remarks at the symposium, "Property Rights on the Frontier: The Economics of Self-Help and Self-Defense in Cyberspace," which was hosted by George Mason University on September 10, 2004. For helpful comments, my thanks to conference participants, and also Douglas Baird, Will Baude, Tom Bell, Bob Bone, Mark Lemley, Saul Levmore, Tom Miles, Tony Reese, Geoff Stone, Lior Strahilevitz, and Adrian Vermeule.

show why some privately administered self-help remedy was not equally effective, and hence constitutionally preferred. I draw on these cases to explore and in various ways challenge a basic intuition about the relationship between state-sponsored remedies and their self-help alternatives: namely, that the existence of a cost-effective self-help remedy argues against government regulation as a means to accomplish similar ends.

I turn in Part II to trade secret law, a legal regime that explicitly casts self-help as a prerequisite to more formal legal protections. That is, trade secret law offers protection only in cases where the relevant secret holder has already made reasonable private efforts to maintain the secret. I consider why trade secret law relies on self-help in this fashion, and why self-help is not more often required in other legal settings. I also examine the reasons why state-sponsored trade secret remedies are available at all, given that private parties do have self-help mechanisms by which to protect their own secrets and would use those mechanisms in a world where the government chose not to intervene.

In Part III, I focus on copyright law. More so than virtually any other area of the law, copyright is constantly being reshaped by self-help technologies. At the moment, powerful new tools for content duplication and distribution are attracting most of the attention, raising doubts over whether existing copyright protections can be meaningfully enforced. Tomorrow, however, advances in encryption technology could easily reverse that trend, empowering authors to control their works in ways that copyright law never imagined, and without any of the concessions that copyright law has always intended. I consider how copyright is responding to both of these realities, struggling to remain relevant in a world where formal legal remedies are often too slow to adapt to changing technological threats. I also focus on a particular legal rule that is somewhat

unique to copyright: an equitable doctrine that might well force private parties to choose between public and private mechanisms, rather than allowing private parties to rely simultaneously on both.

In Part IV, I use patent law to consider a special subset of private remedies: remedies that are as a general matter illegal, but are permissible in specific circumstances because traditional remedies would on their own prove hopelessly inadequate. The most familiar example here is violence that is excused by the privilege in favor of self-defense. The logic is that police officers and other government officials cannot adequately protect citizens from certain types of imminent harm, and thus in those narrow cases citizens are allowed to engage in what would otherwise be criminal aggression. As I will explain, patent law offers its own fact patterns of this sort, and those fact patterns help to unravel the more general puzzle of when legal rules should tolerate otherwise-disfavored forms of self-help.

Finally, in Part V, I briefly conclude, tying my work here into the broader themes of the conference for which this Essay was first prepared.

I. Captive Audiences and the First Amendment

The existence of cost-effective self-help remedies often argues against government regulation as a means to accomplish similar ends; and nowhere is that more apparent than in the vast jurisprudence that surrounds the first amendment.¹ On countless occasions, courts have struck down government restrictions on speech for the simple reason that self-help provides a seemingly

¹ Excellent discussions on the general topic of how self-help opportunities affect first amendment jurisprudence include Douglas Ivor Brandon et al., *Self-Help: Extrajudicial Rights, Privileges and Remedies in Contemporary American Society*, 37 *Vand. L. Rev.* 845, 855-58 (1984); Tom W. Bell, *Free Speech, Strict Scrutiny, and Self-Help: How Technology Upgrades Constitutional Jurisprudence*, 87 *Minn. L. Rev.* 743 (2003).

adequate alternative. Thus, when the city of Los Angeles arrested a war protestor whose jacket bore the now-infamous “Fuck the Draft” inscription, the Supreme Court held the relevant ordinance unconstitutional. Offended viewers, the court explained, have a sufficient self-help remedy in the form of simply averting their eyes.² Similarly, in a long line of cases involving speakers caught advocating crime, sabotage, and other forms of violence as a means of achieving political or economic reform, the Court (albeit after a false start or two³) again struck down government restrictions, emphasizing that, where there is “time to expose through discussion the falsehood and fallacies, to avert the evil by the processes of education, the remedy to be applied is more speech, not enforced silence.”⁴

This is of course not to imply that every self-help mechanism is favored. Violence, for example, can very effectively discourage speech, but violence is a form of self-help to which the government has no obligation to defer. Similarly, hecklers from time to time chill speech by hurling insults (and sometimes glass bottles) but, again, the government is not required in these instances to sit idly by, and in extreme cases might even have an obligation to intervene on the speaker’s behalf.⁵ That said, it is nevertheless striking how often courts invalidate

² See *Cohen v. California*, 403 U.S. 15, 21 (1971) (“Those in the Los Angeles courthouse could effectively avoid further bombardment of their sensibilities simply by averting their eyes.”).

³ See, e.g., *Abrams v. United States*, 250 U.S. 616 (1919) (upholding convictions under facts like these over a dissent by Justice Holmes that articulates what would become the dominant and more generous view).

⁴ *Whitney v. California*, 274 U.S. 357, 377 (1927) (Brandeis, J., concurring). The quote ought not be taken too literally. For example, surely the touchstone is not “time”; in many instances, there will be no meaningful future opportunity to reach the tainted audience no matter how much time might pass, and in such cases additional speech would be an empty remedy. That caveat aside, the Court often invokes this idea of speech chasing speech. See, e.g., *Gertz v. Welch*, 418 U.S. 323, 344 (1974) (“The first remedy of any victim of defamation is self-help—using available opportunities to contradict the lie or correct the error and thereby to minimize its adverse impact on reputation.”).

⁵ See, e.g., *Cantwell v. Connecticut*, 310 U.S. 296, 308 (1940) (“When clear and present danger of riot, disorder, interference with traffic upon the public streets, or other immediate threat to

government regulations simply because plausible self-help alternatives are available. The New York Public Service Commission was for this reason rebuked when it attempted to prohibit power companies under its jurisdiction from including with customer bills pamphlets discussing politically sensitive subjects like the use of nuclear energy.⁶ The restriction was unconstitutional, said the Court, because offended customers have an adequate self-help response: they can throw any troubling pamphlets away. More recently, the federal government has repeatedly failed in its attempts to regulate indecency online, again because self-help—here in the form of software filters that empower Internet users to block speech at the receiving end rather than interfering with speech at its source—calls into question the government’s assertions that the proposed regulations serve a compelling state interest, let alone are sufficiently tailored to pass constitutional muster.⁷

public safety, peace, or order appears, the power of the State to prevent or punish is obvious.”); *Feiner v. New York*, 340 U.S. 315, 326 (1951) (Black, J., dissenting) (“I reject the implication of the Court’s opinion that the police had no obligation to protect petitioner’s constitutional right to talk. . . . [I]f, in the name of preserving order, they ever can interfere with a lawful public speaker, they first must make all reasonable efforts to protect him.”); Elena Kagan, *Private Speech, Public Purpose: The Role of Governmental Motive in First Amendment Doctrine*, 63 U. Chi. L. Rev. 415, 431-32 (1996) (questioning whether the government should be allowed to limit speech merely because other citizens react with hostility to it); Geoffrey R. Stone et al., *The First Amendment 67-75* (1999) (discussing expression that provokes a hostile audience reaction and asking whether the first amendment should require “the police to arrest hostile members of the audience rather than stop the speaker”).

⁶ *Consolidated Edison Co. v. Public Service Commission*, 447 U.S. 530, 542 (1980).

⁷ See *Reno v. ACLU*, 521 U.S. 844, 879 (1997) (finding that the government failed to carry its burden of showing that self-help technologies “such as requiring that indecent material be ‘tagged’ in a way that facilitates parental control of material coming into their homes” would not be as effective as the challenged statute); *Ashcroft v. ACLU*, 124 S. Ct. 2783, 2792-93 (2004) (finding similarly that the government failed to carry its burden in showing that software filters were less effective than the challenged statute).

The Court in these cases actually blurs two distinct arguments. One argument is that the existence of private remedies like filters should lead to the invalidation of any government regulation designed to accomplish the same ends. The other argument is that, because the government can subsidize filters or otherwise increase their efficacy, the government must opt for interventions of that sort, rather than trying to regulate indecency directly. Put differently—

Two intuitions seem to animate these various decisions. First, self-help in these examples makes possible diverse, individuated judgments. It increases the flow of information by allowing willing speakers to reach willing listeners, and it at the same time empowers unwilling listeners to opt out of the communication at low cost. This is attractive because society has a strong interest in allowing each individual to decide for himself what speech that individual will hear. There are of course caveats to this argument; as I will argue below, sometimes individual judgments should be trumped and listeners should be forced to consider information and confront viewpoints that they would rather avoid.⁸ However, in most instances, deferring to the individual is attractive, and thus self-help is favored because it offers listeners significant flexibility to choose what they will hear and also what they will ignore.

Second and perhaps more important, self-help in these examples reduces the government's overall role in regulating speech. The first amendment is suspicious of government regulation not only because regulation inevitably brings with it the possibility that some manipulative government official will use a seemingly innocuous regulation to in fact advance a particular viewpoint—a

and as Tom Bell stresses in his work—self-help has implications for two aspects of first amendment analysis: the question of whether the regulation in question serves a compelling state interest, and the question of whether a regulation that serves a compelling interest is sufficiently tailored. See Bell, *supra* note 1.

⁸ See *infra* notes 16-25 and accompanying text. Accord Cass Sunstein, *Republic.com* (Princeton University Press 2003) (worrying that the Internet makes it too easy for people to hear only what they want to hear). Interestingly, sometimes the best way to force individuals to be exposed to new ideas is to invalidate a government speech restriction and thereby force individuals to rely on self-help. The reason is that a government ban will in certain situations be more effective than the corresponding self-help mechanism. A policy that favors self-help therefore might on its face seem to promote individuation, but might in practice force more people to be exposed to unwanted messages. Thus, if the goal is to expose people to diverse views, there is no single best approach. Sometimes that goal is better served by favoring self-help over direct regulation; other times that goal is better served by favoring direct regulation over self-help.

classic first amendment concern—but also because even well-intentioned regulations can, given the enormous influence of the state, inadvertently skew public discourse. The V-Chip offers a sharp example for this latter concern. The V-Chip is a government-facilitated technology that helps parents filter television content.⁹ Television manufacturers are required to build the filter into every new model 13 inches or larger; and the filter works by reading ratings that are encoded onto broadcast television signals. Those ratings evaluate each program based on a scale that focuses primarily sexual content, language, and violence, and the scale thus makes it easy for parents to filter based on these characteristics. But (and here is the problem) the scale does nothing to help parents filter based on other characteristics, such as religious overtones or political content. The result is that parents who might have previously taken the time to help their children make educated choices based on a combination of all five factors might now opt for the easier approach of just focusing on the government-facilitated three. If that happens—an open question given how few families currently use the V-Chip—the government’s intervention will have skewed content decisions: the importance of the favored characteristics will be amplified at the expense of characteristics not included in the official rating scheme.¹⁰

⁹ See Jack M. Balkin, *Media Filters, The V-Chip, and the Foundations of Broadcast Regulation*, 45 *Duke L. J.* 1131 (1996). The government is as a technical matter responsible for only part of the V-Chip rating system; the rest the broadcast industry developed on a “voluntary” basis. As Balkin explains, however, the reality is that the government put extraordinary pressure on broadcasters to implement this filtering regime and in fact still today oversees many of the relevant details. In the text, I therefore intentionally describe the V-Chip as a form of government regulation, even though government officials would very much resist this description.

¹⁰ Jack Balkin sounded this alarm right after the V-Chip was first introduced. See Balkin, *supra* note 9, at 1166 (“Filtering mechanisms are not neutral means of organization, blocking, and selection. They have important effects on what kinds of materials are subsequently produced and how social arrangements are subsequently organized.”).

The V-Chip example is all the more troubling because the content skew I describe here was not inevitable. Suppose, for example, that the V-Chip were designed not to filter based on specific predetermined characteristics, but instead to filter using collaborative filtering techniques. My family would identify fifteen programs that we deem appropriate. The collaborative filter would use those choices to identify other families with similar tastes. Then the filter would use the choices made by those other families to make recommendations to my family, and it would use future choices made by my family to make recommendations to those other families. Never would any of us need to be explicit about what characteristics drive us to disapprove of one program while favoring another. And, rather than being limited to choose based on the government's three characteristics, our pattern of choices might naturally result from a complicated balance of hundreds of different characteristics, namely ones on which we and like-minded families implicitly agree. The government-imposed skew inherent in the current system would be removed; and the very same first amendment interests championed by self-help in my original examples—individuation, and a reduction in the chance that government regulation will intentionally or inadvertently favor one perspective or subject over another—would at the same time be vindicated.¹¹

¹¹ Another approach would have been to require that the V-Chip be accessible to alternative rating systems, including ones that might have chosen to emphasize factors other than sex, language, and violence. This was actually proposed during the rule-making proceedings at the Federal Communications Commission, but the idea was rejected over concerns about costs and complications. See *In re Technical Requirements to Enable Blocking of Video Programming Based on Program Ratings*, 13 FCC Rcd. 11248 (1998) at ¶11 (“although we are not mandating that TV receiver manufacturers provide for alternative rating systems, we encourage manufacturers to design TV receivers to provide for additional rating systems to the extent practical”). Competing rating systems are used for Internet filtering, although a small number of systems seem to dominate. See Fernando A. Bohorquez, Jr., *The Price of PICS: The Privatization of Internet Censorship*, 43 N.Y.L. Sch. L. Rev. 523 (1999) (discussing competing rating systems for online content).

These two touchstones—individuation, and a reduction in government involvement—do more than help to identify cases where self-help might offer an attractive alternative to government regulation; they also help to identify types of self-help that ought to be disfavored. Heckling, for example, drowns out and discourages speech that otherwise might have been warmly received by a willing audience. It is therefore unattractive on grounds of individuation. Violence similarly is an obstacle to individuation in that it allows a subset of the audience to impose its will on the remainder. With respect to government involvement, meanwhile, violence and extreme forms of heckling both actually increase the need for government intervention. They do so by creating situations where the government must step in to protect public safety.

Courts sometimes insert a third consideration into the mix: the notion that self-help should be preferred only in instances where it will be “equally effective” in terms of achieving the objective that the government regulation itself would target.¹² I do not embrace this third consideration because, in my view, the first amendment at the very least must represent a commitment to sacrifice some modicum of efficacy in order to reduce government involvement in speech regulation. Besides, assertions along these lines are squarely inconsistent with the facts of the foundational cases. The option of averting one’s eyes to avoid exposure to an offensive message, for example, is not as protective

¹² The Tenth Circuit made this mistake when it defended the federal Do-Not-Call registry on the ground that caller ID is not “an equally effective alternative” for minimizing the intrusion caused by unwanted commercial solicitations. *Mainstream Marketing Service, Inc. v. FTC*, 358 F.3d 1228, 1245 (10th Cir.), cert. denied 160 L. Ed. 2d 16 (2004). Such a statement is likely true—as the panel noted, widespread reliance on some form of caller ID would trigger a “technological arms race” with consumers working to screen calls more effectively and the telemarketing industry striving to defeat those protections with various technological masks—but that statement resolves nothing, as the question before the court was not whether self-help was a strictly better approach, but instead whether its deficiencies were so great as to justify a type of government regulation that is constitutionally disfavored.

as a government intervention that would forbid the dissemination of such messages in the first place. The unwilling audience member will typically have to confront at least a glimpse of the offensive message before knowing to turn away, and the process of watching for offensive messages itself necessarily reminds unwilling audience members of exactly the communications they were hoping in the first place to avoid. Similarly, fighting speech with speech is certainly not as effective as prohibiting the troubling speech *ex ante*, among other reasons because speech in rebuttal rarely garners as much attention as the more sensational speech to which it is designed to respond.¹³ As Eugene Volokh has previously noted, to claim otherwise in any of these cases is to unfairly impugn the motives and competency of the relevant lawmakers, in essence accusing them of indefensibly opting for law when self-help would have done just as well.¹⁴ Worse, these assertions hide an important step in first amendment analysis: comparing the loss in efficacy to the gains associated with removing a formal government regulation on speech.¹⁵

¹³ See *Gertz v. Welch*, 418 U.S. at 344 n.9 (“Of course, an opportunity for rebuttal seldom suffices to undo the harm of defamatory falsehood. Indeed the law of defamation is rooted in our experience that the truth rarely catches up with a lie.”).

¹⁴ Eugene Volokh, *Freedom of Speech, Shielding Children, and Transcending Balancing*, 1997 Supreme Court Review 141.

¹⁵ The loss in efficacy is the primary cost associated with self-help in these first amendment examples; but there is another cost that must be accounted for as well: a system that relies on self-help rather than direct government intervention will often favor the wealthy and informed over those with fewer resources or less information. Software filters, for example, can help Internet subscribers avoid indecency online; but they are expensive to acquire and must be installed and maintained by a knowledgeable party. The Supreme Court decision in *Ashcroft*, *supra* note 7, thus has an unequal impact: families with the resources to effectively wield filters might indeed have a plausible alternative to the statute struck down in that decision, but families without those resources as a practical matter do not. Many families fall into that latter category: families where the children are more adept at disabling the filter than parents are at securing it; families where the parents lack the time and knowledge to install and monitor a filter but would obviously benefit from any automatic protection put in place by a federal statute; and so on. See *Ashcroft*, 124 S. Ct. at 2802 (Breyer, J., dissenting) (objecting to filters for these reasons). It is admittedly unclear how far to take this argument, however, given that wealth effects pervade every solution.

My examples thus far all explore this intuition that, in the context of the first amendment, the existence of a plausible self-help remedy poses a challenge to the government's claim that direct intervention is required. But in first amendment jurisprudence the opposite argument also plays a prominent role: where a "captive audience" has no effective self-help mechanism by which to avoid exposure to a given communication, that absence of a plausible self-help mechanism is taken to be an argument in favor of direct government regulation.¹⁶ The point was perhaps most famously made in *Cohen v. California*, the case I mentioned earlier involving the offensive anti-war jacket. The city of Los Angeles defended the arrest in that case on the ground that, because citizens cannot avoid occasionally coming to the local courthouse for official business, and once in the courthouse they cannot avoid being exposed to communications originating around them, the city ought to be allowed to prohibit malicious speech within courthouse walls.¹⁷ Captive citizens have no self-help options, argued Los Angeles city officials, and that lack of any plausible self-help alternative justifies a speech restriction that might otherwise not be permissible.

The captive audience argument was rejected in *Cohen*,¹⁸ but the theory has been invoked in many other instances, and with varying degrees of success. For

Even government regulation, for example, likely favors the wealthy, given that they surely have more influence over the legislative and regulatory process, and greater ability to exercise statutory rights through (where necessary) litigation.

¹⁶ On this theory, the less a listener is able to defend himself from an unwanted message, the greater the government's interest in either facilitating self-help, or directly regulating the unwelcome speaker. To say that an audience is "captive" is thus to say that the costs of engaging in self-help are particularly high. Accord Bell, *supra* note 1, at 752 ("An audience qualifies as 'captive' only if it lacks attractive self-help remedies for countering offensive speech."). For a general introduction to the captive audience doctrine, see Geoffrey Stone, *Fora Americana: Speech in Public Places*, 1974 Sup. Ct. Rev. 233.

¹⁷ *Cohen*, 403 U.S. at 21-22.

¹⁸ The argument was rejected primarily because the statute at issue applied not only to disturbances where the captive audience argument has force—malicious speech disseminated in confined spaces like the courthouse—but also more broadly to any disturbance that would

example, when the city of Shaker Heights, Ohio, decided to allow advertisements to be displayed inside its public transit system, four Justices emphasized audience captivity as an important factor in justifying a government restriction on the types of advertisements allowed,¹⁹ and a fifth would have gone farther and on this argument banned advertisements entirely.²⁰ By contrast, when the city of Jacksonville, Florida, enacted an ordinance designed to stop drive-in movie theaters from displaying potentially offensive visuals in instances where the images would be visible from the public streets, six Justices endorsed the view that the government can selectively “shield the public” in cases where “the degree of captivity makes it impractical for the unwilling viewer or auditor to avoid exposure,”²¹ but the six then announced that in this particular situation the necessary degree of captivity was not realized because drivers could simply look away.²² Personal residences are a setting where concerns about captivity have had particular bite, presumably on the rationale that citizens in their homes should have maximal protection from communications they might find offensive. Thus, in the leading case, the Federal Communications Commission was found to have acted within constitutional boundaries when it prohibited the

disrupt the “peace or quiet of any neighborhood or person.” See *Cohen* 403 U.S. at 22 (citing and discussing the statute); California Penal Code §415 (1971).

¹⁹ *Lehman v. Shaker Heights*, 418 U.S. 298, 302-04 (1974).

²⁰ *Lehman*, 418 U.S. at 307-08 (Douglas, J., concurring) (“In my view the right of the commuters to be free from forced intrusions on their privacy precludes the city from transforming its vehicles of public transportation into forums for the dissemination of ideas upon this captive audience.”). Interestingly, one wonders whether riders on public transportation are meaningfully captive any more, given the ubiquity of portable CD players, cellular telephones, and other technologies that afford a rider easy access to outside communication.

²¹ *Erznoznik v. Jacksonville*, 422 U.S. 205, 209 (1975).

²² *Id.* at 212. This case differs along an important dimension from my earlier examples in that the owner of the drive-in had very little interest in exposing uninterested drivers to his films (perhaps only to the extent that short glimpses would serve as free advertising), whereas the speaker in *Cohen* was very much targeting a population that might be offended by, but forced to think about, his anti-war message.

use of certain vulgar words on the radio, both because “material presented over the airwaves confronts the citizen, not only in public, but also in the privacy of the home,”²³ and because home audiences are captive, with the only plausible self-help solutions being relatively unattractive options like changing the channel at the first sign of offense or refusing to listen to the radio at all.²⁴

Important distinctions can be drawn between these several examples, in that they vary with respect to the nature of the speech at stake, the severity of the speech restriction being challenged, and the degree of audience captivity involved. Those details aside, however, the central insight here is that, where relevant at all, the existence of a captive audience is seen to argue exclusively in favor of government restrictions on speech. That is in my view a fundamental mistake. The absence of plausible self-help remedies is not merely a deficiency that the government ought to be allowed to address, but also an opportunity that the government ought not be allowed to without justification squander.

Think of it this way: we as a society have a strong interest in finding ways to ensure that each of us is exposed to a wide variety of conflicting perspectives. Society in fact expends significant social resources in pursuit of this goal, tolerating repulsive speech like that which originates with hate groups like the Ku Klux Klan; accommodating protesters even at abortion clinics where their message will inevitably upset already fragile emotions; requiring broadcasters to air programming devoted to education and news even though viewers would strongly prefer other television fare; limiting plausibly efficient industry consolidation in and across the radio, television, and newspaper industries for fear that consolidation might lead to conformity in thought or perspective; and, among many other examples, spending real tax dollars each election cycle to

²³ FCC v. Pacifica, 438 U.S. 726, 748 (1978).

²⁴ Id. at 748-49.

finance political campaigns, with much of that money ironically spent to attract the sort of voter attention that the captive audience would naturally provide.

Against this backdrop, audience captivity has genuine and unappreciated appeal. Consider again the courthouse at issue in *Cohen*. Why not allow unfettered speech in the courthouse? Surely it is implausible to think that citizens will stop showing up for city business, or will wear blinders and earplugs as they walk through the public halls. Just the same, it is implausible to think that the government will in response build fewer courthouses in an attempt to indirectly accomplish its original speech-restricting purpose. Thus, harnessing the captive audience in this instance would not lead to any significant behavioral responses. Society would end up with a new mechanism by which to promote exposure to diverse views, and that mechanism would come at relatively low cost given that neither unhappy citizens nor an unhappy government would do much to resist the effort. In short, captive audiences offer an inexpensive way to accomplish goals that society today accomplishes through the more costly mechanisms I outline above. That is not to suggest that every captive audience should be harnessed in this manner, or that using captive audiences in this way would fully obviate the need for those other approaches. My point is only that the existence of a captive audience should not be understood solely as a reason to regulate speech. Captive audiences can be put to beneficial use; and that fact is ignored today in first amendment jurisprudence.

Let me be more concrete. I propose here that the existence of a captive audience is properly understood as a reason to allow unfettered speech, and thus the burden on the government to justify a restriction on speech should be higher in instances where a captive audience is in play than it would be were there no captive audience present. With respect to public transportation systems, then, I

would argue that audience captivity should make us skeptical of a rule that bans advertisements. Why, we should ask, is the government wasting such a golden opportunity to promote diverse communication? In the courthouse, I would similarly be suspicious of any speech-restrictive rule. There might be good reasons for some such rules—perhaps a restriction is necessary to protect children from inappropriate images, or to ensure that court business can be conducted without too much distraction—but, whatever the reasons, I would judge them by a higher standard than that normally applied, precisely because a captive audience is too valuable an asset to without justification waste. Again, this is in contrast to current thinking, where the absence of audience self-help mechanisms is considered to be a reason to allow government regulation, not an argument against it.

This might sound crazy to some readers; but note that society in other settings already makes strategic use of captive audiences. For example, every four years the major television networks all simultaneously air the presidential debates. This is wasteful, in that the broadcasts are largely redundant; but there is little public opposition because everyone understands that this is an attempt to create artificial captivity. If NBC were to offer the option of watching baseball instead of the presidential candidates, a good many citizens would accept the invitation.²⁵ Thus the Federal Communications Commission pressures NBC not to let viewers off the hook so easily, and the networks thereby together create a captive audience and use that audience to pass along hopefully revealing information relevant to the election.

²⁵ This happened in 2000, when NBC offered its affiliates the option of airing a baseball game rather than the first Bush/Gore debate, and FOX chose to premiere the science fiction thriller, *Dark Angel*. Both broadcasters were heavily criticized for their decisions. See William E. Kennard, Fox and NBC Renege on a Debt, *New York Times* (October 3, 2000) at A-27 (Kennard was at the time Chairman of the Federal Communications Commission).

My argument here is made in similar spirit. A captive audience is attractive because it offers an opportunity to pressure individuals to do that which they privately disfavor, and to exert that pressure at low cost in terms of unwanted self-help responses. The strategy should not be used to excess. But, where a captive audience naturally exists, the first amendment should at least ask questions before allowing the government to squander the resource.

II. Trade Secrets and the Arms Race

I focused in the first part of this Essay on issues related to free speech, using the first amendment to think through what are the two most intuitive statements about the relationship between legal rules and self-help remedies: namely, that the existence of cost-effective self-help remedies often argues against government regulation as a means to accomplish similar ends; and, conversely, that the absence of cost-effective self-help remedies often argues in favor. I turn now to trade secret law, and use those legal rules to consider another type of interaction: legal rules that cast self-help as a prerequisite to more formal interventions involving courts and government officials.

Start with some trade secret basics. Although the details vary state by state, trade secret protection is typically extended whenever three conditions are met. First, the information in dispute falls within the subject matter of the law, which under the Uniform Trade Secrets Act means that the information is not generally known and derives some economic value from its secrecy.²⁶ A customer list is a familiar example. Second, the qualifying information is taken by improper means, which is to say that a rival acquires the secret by engaging in trespass, inducing breach of contract, threatening violence, or otherwise either invading a

²⁶ See Uniform Trade Secrets Act, with 1985 Amendments, at §1(4) (defining the term “trade secret”).

protected legal interest, or taking some action deemed to fall below acceptable standards of commercial morality.²⁷ An example in the latter category might be dumpster diving, an act that is in many jurisdictions sufficient to support an allegation under trade secret law, but is not typically in and of itself a tort or trespass.²⁸ Third and finally, at the time of the improper taking, the information in dispute is the subject of reasonable precautions to maintain its secrecy.²⁹ This is a context-sensitive determination that might in one case require the use of a vault to store sensitive papers, while in another requiring that a particular facility be guarded around the clock.³⁰

This last requirement is the specific requirement to which I alluded above: it denies a remedy to any trade secret holder who has failed to exercise reasonable self-help precautions. This is somewhat unusual. Property owners are not required to erect a fence in order to later sue an unwelcome visitor for trespass.³¹ Automobile owners similarly need not prove that they locked their doors or used “the Club”³² in order to qualify for police assistance in retrieving their stolen cars.

²⁷ See *id.* at §1(1) (defining the term “improper means”).

²⁸ See *California v. Greenwood*, 486 U.S. 35, 39 (1988) (holding in the Fourth Amendment context that there is no reasonable expectation of privacy in garbage left for disposal). See generally Harry Wingo, *Dumpster Diving and the Ethical Blindspot of Trade Secret Law*, 16 *Yale L. & Pol’y Rev.* 195 (1997).

²⁹ See Uniform Trade Secrets Act at §1(4)(ii) (defining the term “trade secret”).

³⁰ See, e.g., *Rockwell Graphic Systems, Inc. v. DEV Industries, Inc.*, 925 F.2d 174 (7th Cir. 1991) (discussing the precautions appropriate in a dispute involving product drawings). For an excellent introduction to trade secret law and its puzzles, see Merges et al., *Intellectual Property in the New Technological Age* 27-104 (3d ed., 2003). A helpful introduction to the economics of trade secrecy can be found in William M. Landes & Richard A. Posner, *The Economic Structure of Intellectual Property Law* 166-209 (2003).

³¹ In certain instances, hunters are allowed to trespass on private party unless the property owner posts a sign notifying hunters that entry is not permitted. The practice is referred to as “posting the land,” and the details vary considerably from state to state. See Tom Simmons, *Highways, Hunters, and Section Lines: Tensions Between Public Access and Private Rights*, 2 *Great Plains Nat. Resources J.* 240, 250-54 (1997).

³² The Club is a commercial product that locks onto an automobile steering wheel and makes it difficult to drive the car. An owner who uses the Club thus reduces the likelihood of auto theft,

Nor must creditors attempt self-help repossession prior to asking a court to transfer property that once served as collateral for a now-defunct loan.³³ Yet, to qualify for trade secret protection, trade secret holders must prove that their secret was unveiled despite reasonable efforts to ensure its secrecy. Why?

One justification is that self-help serves to distinguish the bulk of normal business information from that special subset of information that warrants protection.³⁴ The idea is to keep the scope of trade secret protection in check by only protecting information in cases where the relevant trade secret holder signaled, up front, that the information was valuable. This is a task that seems unnecessary in the other examples. It is likely efficient to protect every piece of property from basic instances of trespass, to protect every car from unlawful access and use, and to allow every creditor to make good on the threat of taking possession of collateral in the event of a default. But it would be counterproductive to protect every shred of information from unauthorized dissemination, given that a modest flow of information across competitors surely stimulates innovation. And too restrictive a trade secret regime would impose huge administrative costs as parties would constantly fight over who learned what from whom. Thus the need to narrow and clearly mark that which is

in that the thief now must not only hotwire the car ignition, but also somehow disengage the Club.

³³ Creditors in certain instances have the option to engage in self-help repossession. But a creditor not interested in exercising this self-help option—say, for fear of legal liability if for some reason it turns out that the debtor was not in default—can, without any negative repercussions, choose to rely exclusively on judicial process. See U.C.C. §9-503 (2004).

³⁴ See Merges et al., *supra* note 30, at 50 (“one might treat the requirement of reasonable precautions as serving a gate-keeper function to weed out frivolous trade secret claims by requiring evidence of investment by the plaintiff in protecting the secret”); Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. Legal Stud. 683 (1980) (precautions serve to distinguish secrets from everyday unprotected information).

eligible for protection is a somewhat distinctive characteristic of trade secret law as compared to these other examples.³⁵

A second justification is that self-help here provides circumstantial evidence that a given trade secret was taken unlawfully. A firm that mixes its secret chemical concoctions in a glass building would be hard pressed to prove that a rival took its secret by improper means. By taking precautions, a firm thus helps to establish at least a suggestion that there was an underlying bad act. There is less need for this type of evidence, by contrast, in my other examples, in that there will typically be reliable, physical evidence of a trespass; similarly reliable, physical evidence of automobile theft; and a clear document trail to establish the existence of a loan, the failure to pay that obligation, and the agreed-upon ramifications of that failure.³⁶ Just to be clear on what this means: I do not at all mean to imply that circumstantial evidence should suffice to prove a trade secret claim; there is always the very real possibility that the secret was taken by lawful means, and also the possibility that the secret was not taken at all but instead was independently discovered by the accused party. My point is only that, by requiring precautions, trade secret law removes from contention a category of cases where circumstantial evidence would not be available as a starting point

³⁵ Trade secret law could narrow and mark information in other ways. A neon sign would do the trick, as would a paperwork system where trade secrets holders record their interests in much the same way that security interests are recorded today. The key consideration is to ensure that in each case the relevant signal is sufficiently clear so as to keep administrative costs down, and sufficiently expensive such that trade secret holders face some pressure to choose a subset of information rather than protecting everything they know. Beyond that, plausible arguments can be made for a variety of signaling mechanisms, of which self-help in the form of reasonable precautions is just one.

³⁶ Some evidentiary disputes naturally remain in these other examples. My claim here is only that the lack of evidence would be an overwhelming problem in trade secret litigation but for the requirement that trade secret holders undertake reasonable precautions.

for the analysis. The law might reasonably conclude that the costs of legal intervention in these precarious cases exceed any expected benefits.³⁷

A third and final justification for trade secret law's reasonable precaution requirement is that such a requirement encourages firms to engage in self-help where that is the most efficient means by which to protect secret information. The idea here is that the law must sometimes encourage self-help, as the private incentive to engage in self-help does not necessarily well reflect the social payoffs. This is certainly true in other areas of the law. In tort law, for example, there is some question over whether accident victims would, if left to their own devices, take adequate precautions; and thus in many states rules of comparative and contributory negligence operate to reduce or eliminate damage awards in instances where the victim is himself at least partly to blame.³⁸ The common law similarly in many instances requires that an injured party mitigate his damages, again the requirement being justified on the ground that an injured party might not on his own mitigate even where that would be efficient.³⁹ In the context of trade secret protection, however, I must admit that I find this explanation rather

³⁷ For a parallel argument applied to copyright law—again the core insight being that many legal doctrines can and should exclude from protection cases that are prone to evidentiary complexity—see Douglas Lichtman, *Copyright as a Rule of Evidence*, 52 *Duke L.J.* 683 (2003).

³⁸ My statement here obviously simplifies what has been a long-running debate in the economics literature over how best to encourage parties to take efficient precautions. For example, economic analysis under certain assumptions suggests that ordinary negligence rules already encourage efficient victim precaution, the reason being that a victim does not recover damages if the defendant took care but an accident occurred anyway. Under other assumptions—say, imperfect information—the analysis is less conclusive, and naturally there remain significant concerns in the context of strict liability. The details here are not central to my claims in the text; for citations and a nice overview, however, see Christopher J. Robinette & Paul G. Sherland, *Contributory or Comparative: Which is the Optimal Negligence Rule?*, 24 *N. Ill. U. L. Rev.* 41, 51-53 (2003).

³⁹ For a helpful discussion of the mitigation doctrine and its applications within tort law and beyond, see Eugene Kontorovich, *The Mitigation of Emotional Distress Damages*, 68 *U. Chi. L. Rev.* 491, 496-499 (2001). See also Restatement (Second) of Contracts at §350(1) (“damages are not recoverable for loss that the injured party could have avoided without undue risk, burden or humiliation”).

weak. The problem is that, in most instances, private parties would choose to engage in reasonable precautions even if the law did not so require. No sense in hiring a lawyer when a simple fence will do. Given that, it seems relatively unconvincing to say that trade secret law requires reasonable precautions as a way of encouraging parties to take them.⁴⁰

More generally, most legal rules do not require self-help as a precondition to formal legal process, and I suspect that the reason is that the private incentive to engage in self-help is in all of these cases already sufficiently strong. Property law, for example, could require that every land owner put up a fence as a first barrier to unauthorized trespass; but why bother? Even without any legal obligation, most land owners install fences as needed. Why add another variable to trespass litigation by requiring land owners to prove the existence of a fence prior to alleging a trespass? (Moreover, in those rare cases where a land owner fails to install a fence, it might be better to leave open the possibility of legal process rather than risking violence by denying the land owner any other remedy.) This same logic also explains why the law does not require automobile owners to prove that they used car locks and other anti-theft devices. What a mess it would be to prove those facts in litigation, and there would be so little corresponding benefit given that most drivers lock their doors in any event. Creditors, too, will in most instances opt for self-help where that is truly the

⁴⁰ In other work, I have raised a similar argument regarding copyright law's requirement that, to be eligible for protection, a work must be fixed in a tangible medium of expression. Fixation has obvious virtues in that it increases the likelihood that the relevant expression will be passed from person to person, place to place, and generation to generation. Unfixed expression—say, an oral history or folktale—is more difficult to transfer and thus more likely to be lost. But, as I explain, that is not an argument in favor of the fixation requirement. After all, it is unlikely that requiring fixation actually increases the number of works that are fixed, because fixation is already cheap, easy, and significantly in an author's own interest. Thus, as it is with reasonable precautions in the trade secret context, the fact that society might want parties to engage in fixation is not itself a reason to require that act. See Lichtman, *supra* note 37, at 723-724.

more efficient alternative, and thus a creditor's decision not to engage in self-help is again a judgment to which courts should likely defer.

None of this is to deny that there are instances where private parties do not have adequate incentives to engage in efficient self-help, and—as my tort and mitigation examples suggest—in those instances the law should and typically does cast self-help as a prerequisite to legal relief. But these are exceptions to the more common rule: where a party chooses not to attempt self-help, there are typically good reasons, as the private incentive to engage in self-help is naturally present and in most cases strong.⁴¹

The above all combines to explain why trade secret law casts self-help as a prerequisite to more formal legal protections; but consider now the inverse question of why, given the possibility of self-help, formal legal protections are available at all. Perhaps the most obvious answer is that in many settings self-help precautions will fall short, failing to protect information that on policy grounds should be protected.⁴² That is, it might be difficult to adequately secure a business facility from corporate espionage, and yet a limited ability to maintain

⁴¹ I focus in the text on cases where the private incentive to engage in self-help might be too low. Obviously, there are other settings where the private incentive might be too high. Drivers, for example, likely have too strong an incentive to protect their automobiles using the Club. The private benefits of this self-help precaution are high—the Club reduces the likelihood that the protected car will be stolen—but the social benefits are modest, given that the Club mainly encourages car thieves to substitute one theft for another. The proper legal response might be either to discourage the use of the Club, or to subsidize alternative protections that actually reduce the incidence of car theft overall. Lojack might be one such alternative. See Ian Ayres & Steven D. Levitt, *Measuring Positive Externalities From Unobservable Victim Precaution: An Empirical Analysis Of Lojack*, 113 Q. J. Econ. 43 (1988) (arguing that Lojack does not have the substitution problem, primarily because Lojack is virtually invisible, and thus car thieves cannot determine which cars are protected and which are not).

⁴² Courts and commentators frequently invoke this explanation, emphasizing that trade secret law beneficially encourages innovation. See, e.g., *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974); David D. Friedman et al., *Some Economics of Trade Secret Law*, 5 J. Econ. Persp. 61 (1991). But see Robert G. Bone, *A New Look at Trade Secret Law: Doctrine in Search of Justification*, 86 Calif. L. Rev. 241, 262-72 (1998) (questioning this justification on the ground that other legal regimes already promote innovation and protect valuable information sufficiently).

secrecy is surely attractive, for the simple reason that secrecy encourages firms to invest in the development of new and useful information. Trade secret law thus fills an important void, creating that incentive and thereby acting as both a complement to and competitor for patent law.⁴³

There is another and more striking answer to the question of why formal legal protections are layered on top of self-help remedies in this setting, however: trade secret law might simply serve to displace particularly wasteful forms of self-help. For instance, in the absence of robust legal protections, a concerned employer might inefficiently subdivide important tasks across employees in order to minimize how much any single employee knows about the firm. An employer might similarly put family members into sensitive positions rather than more qualified job applicants, the assumption being that family members are apt to be more loyal. The employer might even adopt strategies designed to restrict employee mobility (long-term stock options, for example, that vest only after a certain number of years of service) again as a mechanism by which to indirectly maintain control over firm secrets.⁴⁴ These are costly, second-best

⁴³ Trade secret law on this theory should coordinate with patent law, pushing inventors toward the patent system in cases where eligibility and scope differences suggest that patent law might be the more attractive option from a social perspective, and attracting inventors where those same differences counsel the opposite result. To some degree, the law is consistent with this expectation, although the patchwork nature of the various legal doctrines does little to inspire confidence. For an overview, see Robert Patrick Merges & John Fitzgerald Duffy, *Patent Law and Policy: Cases and Materials* 565-68, 602-08, 611-13 (3d ed., 2002) (considering how the use of information as a trade secret reduces the possibility that the information can later be subject to patent protection).

⁴⁴ Many commentators believe that employee mobility facilitates innovation. See, e.g., Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete*, 74 *N.Y.U.L. Rev.* 575 (1999); AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (1994). Employee mobility also has real value to employees, who might want to change employment for any number of valid reasons.

approaches,⁴⁵ if they cannot be easily regulated—and note how hard it would be to determine whether information in a given firm was being inefficiently subdivided across employees, or whether family members were being favored because of their loyalty rather than their qualifications—the best response might be to acknowledge that constraint and offer legal process as a substitute for these effective but wasteful methods.

Avoiding the costs associated with self-help is actually a common justification for legal rules that might on the merits be hard to explain. Patent law certainly benefits from this kind of second-best story, a story where trade secret protection itself plays the role of costly foil.⁴⁶ So, too, privacy protections. At first blush, modern law seems overly protective of personal privacy, restricting the disclosure of private facts related to personal finances, sexual orientation, medical conditions, and the like, even in instances where public revelation might serve social interests. Imagine, for example, if information about sexual promiscuity and sexual orientation could be acquired and disseminated without fear of legal liability. The former would do much to protect unsuspecting partners from the dangers of STDs, while the latter might significantly de-stigmatize what are still today controversial closet preferences.⁴⁷ Yet the law

⁴⁵ See Bone, *supra* note 42, at 272-79 (summarizing various strategies like these, but then questioning whether legal process is in fact less costly than these wasteful alternatives); Landes & Posner, *supra* note 30, at 354-71 (also identifying comparable strategies, and emphasizing that legal rules can in fact offer less wasteful mechanisms for achieving comparable ends).

⁴⁶ See Landes & Posner, *supra* note 30, at 354 (“the best economic justification for patent law is that it ... curbs certain inefficiencies unavoidably created by trade secret law”). This argument works only if we think that, in certain settings at least, patent law offers a better cost/benefit ratio than does trade secret law. That might be true; many commentators celebrate patent law’s disclosure requirements, for example, because disclosure reduces the chance that two parties will needlessly develop the same invention. But the analysis is complex, as patent law creates legal monopolies that impose obvious social costs and distortions of their own.

⁴⁷ But see Daniel J. Solove, *The Virtues of Knowing Less: Justifying Privacy Protections Against Disclosure*, 53 *Duke L. J.* 967, 1041-43 (2003) (arguing that it is difficult to remove stigmas, often because there is a grain of truth hidden in otherwise distasteful judgments).

protects these facts⁴⁸—and it arguably does so because, in the absence of protective legal rules, individuals would protect their privacy anyway, and would do so in ways that are more wasteful still. Patients would withhold vital information about their sexual history from doctors; adults discussing personal matters over the telephone would speak in tongues; and lovers interrupted in the privacy of their home would on occasion resort to violence. Merits aside, then, privacy law might be explained simply on this notion that the law obviates the need for costly self-help measures.⁴⁹

On this general theme of how legal rules can be used to lure parties away from more costly forms of self-help, one special category merits particular attention: the arms race. In *E.I. du Pont de Nemours & Co. v. Christopher*,⁵⁰ the chemical firm DuPont was in the process of building a plant at which the firm intended to use its secret but unpatented process for producing methanol. Access to the construction site was protected by fences and security personnel, the idea being to stop competitors from venturing onto the property and discovering the

⁴⁸ This is accomplished not only through tort doctrines like those which prohibit unreasonable intrusion upon the seclusion of another—think here of wiretapping a phone, using binoculars to peer through a neighbor’s window, or physically entering private premises uninvited—but also through related prohibitions on the unauthorized publication of already-discovered private facts.

⁴⁹ I should point out that privacy law does permit disclosure in instances where the revelation of a private fact seems to serve an immediate and important social interest. A psychiatrist, for example, can and indeed must break the doctor/patient privilege if he learns that his patient is about to commit a violent crime. See *Tarasoff v. Regents of the University of California*, 551 P.2d 334 (Cal. 1976). Medical professionals have similarly been held liable for failing to warn a patient’s spouse that the patient was suffering from a dangerous and communicable disease. See *Bradshaw v. Daniel*, 854 S.W.2d 865 (Tenn. 1993). Recognizing exceptions, however, is a far cry from refusing to protect the information outright. With respect to STDs, for instance, it is implausible to think that a knowledgeable party will be able to identify in advance every vulnerable sexual partner and quietly warn that partner of the medical risks ahead. The exception in favor of such disclosures thus accomplishes little. The partner would be much more richly protected in a world where information about sexual promiscuity were freely available. Privacy law does not take that step, however, because self-help makes that outcome unattainable.

⁵⁰ 431 F. 2d 1012 (5th Cir. 1970).

secret process by inspection. So a cunning competitor chartered an airplane to take pictures of the plant from above. DuPont filed suit, and the question before the court was whether this sort of aerial espionage was prohibited under Texas state law. The court noted that DuPont could have protected itself by covering the construction zone with a tarp, but nevertheless sustained the trade secret claim. Explained the court, “To require DuPont to put a roof over the unfinished plant to guard its secret would impose an enormous expense to prevent nothing more than a school boy’s trick.”⁵¹ Thus trade secret law was used to avoid an arms race, with DuPont investing in guards and a fence, competitors procuring airplanes and cameras, DuPont responding with a tarp and perhaps radar detection, competitors returning with (say) satellite images and heat-sensitive camera technology, and so on and so on.⁵²

Arms races like this one are remarkably common, and legal rules are often asked to reign in the resulting waste. That, however, is often an Herculean task. For instance, in response to online copyright infringement, copyright holders have in recent years worked feverishly to develop new technologies by which to protect their work from unauthorized duplication. As each new technology is unveiled, however, the hacker community responds, developing corresponding technologies for breaking encryption and freeing protected content.⁵³ The Digital Millennium Copyright Act was designed to slow this race—that Act makes it illegal to “circumvent a technological measure that effectively controls access” to

⁵¹ *Id.* at 1021.

⁵² Interestingly, one wonders why DuPont did not take the simple step of introducing some fake pipes into its plant design. That would have confused any aerial spies, and it would have cost much less money than either a tarp or litigation.

⁵³ See, e.g., *Universal City Studios, Inc. v. Corley*, 273 F. 3d 429 (2002) (litigation over distribution of software that would allow for the unauthorized decryption of protected DVD content); Benny Evangelista, *Recent Cases Show Entertainment Industry’s Difficulties in Locking Out Hackers*, *The San Francisco Chronicle*, May 3, 2001, at F1 (reporting on that litigation and other comparable disputes).

a copyrighted work⁵⁴—but the results have been disappointing, as hackers are difficult to identify, they often operate in foreign jurisdictions, and they rarely have the resources sufficient to pay legal judgments in any event.

Arms races can be difficult to stop for another reason: often the very acts that further a race are hard to distinguish from legitimate acts that courts are reluctant to prohibit. For instance, back when Internet search engines ranked results based on the frequency with which the chosen search term appeared on a given page, clever website owners would imbed valuable marks, and marks associated with their competitors, in unprinted parts of their websites, and then repeat those terms so many times that search engines of the day would mistakenly think that these disingenuous websites were a good match for the search terms in question. Litigation against this practice moved forward under the trademark theory of initial interest confusion, a theory that basically forbids the use of a trademark to attract customer attention under false pretenses. But the law could never completely solve the problem. The reason was that many website operators had colorable good faith defenses. A former Playboy centerfold, for example, could justify using the Playboy mark, even if most of the viewers brought to her site were actually looking for the official Playboy page.⁵⁵ It was therefore difficult for trademark law to forbid the bad act that was driving the arms race without also interfering with perfectly legitimate trademark usage.

A similar problem has slowed efforts to thwart yet another Internet arms race, this one involving the various services that help end-users share music online. When the centralized Napster service was effectively shut down through

⁵⁴ 17 U.S.C. §1201(a)(1)(a). See also *id.* §§1201(a)(2) & (b)(1) (further prohibiting firms from manufacturing or otherwise trafficking in technologies primarily designed to facilitate circumvention).

⁵⁵ See *Playboy Enterprises v. Welles*, 279 F. 3d 796 (9th Cir. 2002) (former playmate allowed to use Playboy vocabulary because vocabulary did accurately identify her as a former playmate).

legal action, it was replaced by decentralized alternatives like Grokster and KaZaA, services that are more difficult to stop because they have no central node through which all requests for music must pass. That change led to an arms race, with copyright holders using mislabeled decoy files to pollute the new networks,⁵⁶ while network designers worked to build reputation information into their architecture such that a user tricked by a decoy file could warn other users not to download that false file or even interact with the trickster who introduced it. As I say, the courts have had trouble slowing this particular race, the problem being that Grokster and KaZaA have legitimate as well as illegitimate uses. As with the Playboy example, that has made the courts reluctant to intervene, the fear being that any remedy effective against illegitimate uses might inadvertently interfere with legitimate ones as well.⁵⁷

Lest these examples be read to suggest that modern arms races are exclusively high-tech, consider the recent dispute between Major League Baseball's Chicago Cubs and the several firms that own rooftop properties overlooking the Cubs' home stadium, Wrigley Field.⁵⁸ At issue in the dispute were what are in essence unauthorized stadium skyboxes—complete with plush

⁵⁶ This sort of deception is a well-known mechanism by which to combat peer-to-peer file sharing. It frustrates users by tricking them into downloading the wrong songs, in that way making illegal music less convenient and hence marginally less attractive. Variants on the theme include uploading unpopular songs but labeling them as popular ones, uploading versions of the desired songs but garbling key sounds, and (my favorite) uploading versions of the desired song but interrupting the music with a message from the relevant artist chastising the supposed fan for acquiring music illegally. The term "spoofing" is used to describe a comparable practice. For discussion, see Doug Lichtman & David Jacobson, *Anonymity a Double-Edged Sword for Pirates Online*, *Chicago Tribune*, Apr. 13, 2000, at 25.

⁵⁷ I say much more on this subject in notes 99-113 and accompanying text.

⁵⁸ See Jodi Wilgoren, *Cubs Sue Neighborhood Bars on Rooftop Use*, *New York Times*, Dec. 18, 2002, at D4. I was directly involved in this particular dispute—I advised the Cubs on questions related to copyright preemption—so I should make expressly clear that the brief discussion here represents my own views, draws only on information publicly available, and should in no way be attributed to the Cubs, the team lawyers, or the team owners.

seats, fancy catering, and full service bars—built on these nearby rooftops and to which tickets are sold to watch Cubs baseball. The Cubs understandably thought these seats illegal; rooftop seats compete with stadium seats and yet the rooftop owners were contributing nothing toward team salaries or stadium upkeep. But copyright law offered no remedy. Courts are split over whether baseball games are eligible for copyright protection in the first place;⁵⁹ and, even if baseball games are eligible, the act of watching a copyrighted work without permission does not itself violate any of copyright law's exclusive rights.⁶⁰ While preparing to litigate state law claims sounding in misappropriation and unjust enrichment, the Cubs therefore triggered a little arms race: the team installed a large canvas windscreen that just so happened to block the view from several rooftop properties. The rooftop owners in response made plans to raise their rooftop seats higher; and, by the time a court began hearing the merits of the dispute, rumor had it that the Cubs were planning to construct a giant balloon that would have randomly obscured even elevated rooftop views. The arms race was abandoned when the parties came to terms last August. The rooftop owners

⁵⁹ See *NBA v. Motorola, Inc.*, 105 F.3d 841, 846 (2d Cir. 1997) (games are not eligible for protection because they are competitive and have no underlying script); *Baltimore Orioles, Inc. v. Major League Baseball Players Ass'n*, 805 F.2d 663, 669 n.7 (7th Cir. 1986) (player performances exhibit the modicum of creativity required for copyright eligibility). Interestingly, Dick Posner suggests that it might be sensible to allow baseball games to be protected because, in the absence of protection, an arms race would ensue, with game sponsors endeavoring to use contract law to restrict unauthorized access, and unauthorized viewers endeavoring to sneak a view by putting cameras in blimps or satellites. See Richard A. Posner, *Misappropriation: A Dirge*, 40 *Hous. L. Rev.* 621, 632-33 (2003).

⁶⁰ See 17 U.S.C. §106 (articulating the exclusive rights enjoyed by a copyright holder). The reason that there is no exclusive right related to unauthorized viewership is likely that such a right is in all but the most unusual cases unnecessary. Concert performers, basketball teams, and orchestras do not need this sort of legal protection to exclude uninvited guests; they already have effective self-help options in the form of gates, tickets, turnstiles, and guards.

agreed to share profits with the Cubs, and the Cubs in exchange agreed to engage in joint marketing with the rooftop owners.⁶¹

Legal rules that endeavor to stop arms races ultimately must confront three complexities, each implicit in the previous examples. First, there is the practical concern that efforts to stop an arms race will in fact merely redirect its energies elsewhere. After losing its trade secret case, do we really believe that DuPont's rival acquiesced, rather than instead looking to rent a faster airplane or an airplane that flies at higher altitudes, two among dozens of adjustments that would have made it more difficult for DuPont to detect the espionage in the first place?⁶² Similarly, even if the courts had been quick to intervene in the Cubs dispute, how much would have been gained, given that the parties would have just shifted their dispute to the political arena, competing there in efforts to lobby local officials and sway public opinion?⁶³ This is not to imply that there is no value in shifting a race from one technology or venue to another; quite the

⁶¹ See Jeremy Mullman, *Rooftop Rapprochement*, *Crain's Chicago Business*, Aug. 16, 2004 at A5. Experience with arms races like this one suggests that parties either do not accurately anticipate their rivals' responses, or that they do anticipate those responses but find it difficult to negotiate out of the interaction nonetheless. That is, one might imagine that the rooftop owners would have anticipated that the Cubs would install windscreens, and the Cubs would have anticipated that the rooftop owners would in response raise their seating, and so on; and that, armed with that knowledge, the parties would have been able to strike a bargain that would have avoided the actual costs of each side actually making good on its self-help threats. Yet, there was no such armistice. One reason might be that it is more difficult than it seems to predict the next move in the game, especially in a world where political pressure and public opinion might constrain particular parties at particular times. Another reason might be that there advantages to one or both sides from engaging in the race; for instance, the waste associated with the race might usefully pressure an otherwise reluctant court to intervene. Cf. Bone, *supra* note 42, at 275 (suggesting that a party will anticipate its rival's response and avoid waste accordingly, but then presenting a model to show that anticipation likely does not much reduce the overall expenditures made in the course of a race).

⁶² Bob Bone also worries about this possibility. See Bone, *supra* note 42, at 276-279.

⁶³ Then again, there is reason to believe that the dispute here actually started in the political realm and only shifted to a physical and legal dispute after the political interactions were exhausted. See Wilgoren, *supra* note 58 (noting two years of talks that preceded the litigation and involved the various parties as well as Chicago city officials).

opposite, each interaction imposes unique externalities, and each is subject to unique economic, technological, and political constraints. My argument is only that it is rare for law to completely disarm parties with adverse interests, and thus arguments predicated on the waste associated with self-help must always be sensitive to the realities of substitution.⁶⁴

Second, arms races are not always harmful, and the law must therefore be careful to identify those rare but important races that ought to be allowed to continue. The Cubs dispute offers an example of a purely wasteful race: it is implausible to suggest that the introduction of windscreens enhanced the experience for fans in either location, and raising the height of rooftop seating at some point not only introduces serious safety concerns but also obscures the view of the field.⁶⁵ Contrast that, however, with the race that surrounds the distribution of copyrighted materials online. Now admittedly there is substantial

⁶⁴ Government efforts to thwart races are often limited by the reality of substitution. The “prospect theory” of patent law, for example, suggests awarding an early, broad patent that covers a large field of endeavor in order to reduce the waste that would be incurred were multiple inventors free to compete to develop the many inventions covered by the broad patent. See Edmund Kitch, *The Nature and Function of the Patent System*, 20 *J. L. & Econ.* 265 (1977). A problem with the theory is substitution: patent protection accelerates the race to an earlier stage, with inventors now racing to claim the broad, early patent. Donald G. McFetridge and Douglas A. Smith, *Patents, Prospects, and Economic Surplus: A Comment*, 23 *J. L. & Econ.* 197 (1980). Similarly, for many years, local communities had only one cable licensee and only one authorized local telephone provider, the idea being that having multiple providers would lead to wasteful duplication of the telephone and cable grids, respectively. See *Omega Satellite Products Co. v. Indianapolis*, 694 F. 2d 119, 126 (7th Cir. 1982) (Posner, J.). Substitution again gummed up the works: waste was incurred in a new form, as firms fought in the public and political arenas to increase their chances of being chosen the lucky winner. See Aditya Bamzai, *The Wasteful Duplication Thesis in Natural Monopoly Regulation*, 71 *Univ. of Chic. L. Rev.* 1525 (2005). The lesson in each of these examples is the same: it is difficult to stop private parties from racing, and thus the focus of the law should be to choose the race that has the most attractive cost/benefit profile. Cf. John Duffy, *Rethinking the Prospect Theory of Patents*, 71 *U. Chi. L. Rev.* 439 (2004) (defending the prospect theory on the ground that an accelerated patent race has real allure: it forces earlier patenting, and in so doing moves the relevant patent’s expiration date earlier in time).

⁶⁵ Perhaps this is why the case ultimately settled. Both sides recognized that racing was expensive and was producing little value for Cubs fans.

harm inherent in that race: the introduction of decoy files, for example, exhausts bandwidth that could be better used for legitimate exchanges of information; and the entire interaction poses a real threat to the overall integrity of the copyright system. But, on the bright side, the back-and-forth over encryption and distribution technologies has inspired a great many young people to think about new protocols for Internet communication and new concepts in network design. They might be doing so for all the wrong reasons; but, thanks to the copyright wars, a creative and sophisticated intellectual resource—one that might have been impossible for society to in other ways tap—has contributed, perhaps substantially, to advances in Internet technologies. (That last step is important. Almost every race has some plausible spillover benefit; what is unique about the copyright arms race is that the spillover benefit would have been all but impossible to achieve but for the race.)

The arms race in the previous example is attractive because of the activities undertaken in the process of racing. Consider now an example that is attractive instead because of the outcomes the race makes possible. Under conventional trade secret principles, a competitor is permitted to purchase a rival's product, smash it to pieces on the ground, and then study those remnants to learn whatever secrets they might reveal.⁶⁶ This is referred to as reverse engineering, and just like every other means by which one competitor might learn secrets from another, reverse engineering triggers self-help responses. For instance, because reverse engineering is permissible, firms have an incentive to introduce unnecessary complexity into their products in an effort to stymie reverse engineering attempts. Firms also have an incentive to distort the design of their

⁶⁶ Reverse engineering can take other forms, like testing the properties of a competitor's product, or decompiling the competitor's computer code. See Uniform Trade Secrets Act, with 1985 Amendments, at §1 Comment 1 (identifying as a proper means of discovery the act of taking a "known product and working backward to find the method by which it was developed").

products and services, perhaps favoring designs where the critical step is accomplished by a software process rather than (say) a more transparent hardware product. Reverse engineering, then, spawns a classic arms race; but trade secret law nevertheless allows it on the theory that the additional exchange of information made possible by reverse engineering more than compensates for the waste. Reverse engineering is an attractive means by which to accomplish this function because reverse engineering need not be done in the presence of the trade secret holder and thus it is unlikely to disrupt the trade secret holders' business operations or lead to physical confrontation.⁶⁷

Third and finally, note that the mere existence of a wasteful arms race does not by itself offer any insight into which party ought to be favored in any resulting legal intervention. Recall once more the dispute involving DuPont. That DuPont and its rival were on the verge of an arms race is clear; but reasonable minds might disagree as to whether the best result would have been to stop the arms race and recognize a legal interest in favor of DuPont, or stop the arms race and recognize instead a legal interest that would allow rivals a glimpse at the

⁶⁷ Although I believe that reverse engineering should often be permissible, I am skeptical of the privilege in certain applications. For example, there are some types of reverse engineering that are so cheap that they threaten to fully undermine the incentive to engage in innovative activity in the first place. I have argued that, in those cases, it might be attractive to allow for some form of prohibition against the cheap copying technique. See Douglas Gary Lichtman, *The Economics of Innovation: Protecting Unpatentable Goods*, 81 *Minnesota Law Review* 693 (1997). Another problem is that reverse engineering sometimes undermines a type of coordination that might otherwise benefit both an industry and its customers. Thus I have argued that manufacturers of new computer platforms—a new handheld computer or a new video game system—might need some protection against reverse engineering, protection sufficient to allow the platform owner to coordinate the development of complementary goods like software and hardware peripherals. See Douglas Lichtman, *Property Rights in Emerging Platform Technologies*, 29 *Journal of Legal Studies* 615 (2000) (explaining how coordination benefits both producers and consumers). Other academic authors have raised their own concerns about the proper scope for reverse engineering. See, e.g., Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 *Yale L. J.* 1575 (2002); Landes & Posner, *supra* note 30, at 369-71.

disputed trade secret. An argument in favor of the former approach would emphasize the importance of allowing DuPont to earn a return on the investment it made in developing its secret process. An argument in favor of the latter approach would stress the benefits of allowing firms to learn from one another, cross-pollinating in much the same way championed by the privilege in favor of reverse engineering. Interestingly, the court had only one of these options at hand: it could sustain DuPont's claim of a violation of trade secret law and thereby assign the property right to DuPont. There was no plausible counterclaim—unlawful interference with an aerial view?—that would have empowered the court to assign the right in favor of the spying competitor. This is something of an aberration, however; in most instances, the court has before it legal claims sufficient to assign the relevant right to either litigant, and the puzzle comes only in deciding which party wins on the merits.

III. Copyright and Copyright Infringement

Thirty years ago, the only significant self-help mechanism available to an author who wanted to maintain control of his work was to keep the work confidential. Once a work went public, its author had no choice but to turn to copyright law for any semblance of control over reproduction, dissemination, adaptation, and performance. As a result, authors also had no choice but to accept the constraints that came along with federal rights, constraints like the fair use doctrine,⁶⁸ the first sale doctrine,⁶⁹ and limitations on the ownership of facts

⁶⁸ 17 U.S.C. §107 (excusing infringement in certain cases based on an open-ended policy inquiry).

⁶⁹ 17 U.S.C. §109(a) (authorizing a legal owner to resell or otherwise transfer his legitimate copy without the need for explicit permission from the copyright owner)

and ideas.⁷⁰ This landscape changed significantly, however, with the introduction of “digital rights management” and related mechanisms that allow content owners to opt out of copyright law and instead rely on encryption and monitoring technologies to control access to their work. Encryption and monitoring allow a content owner to package content such that it (say) stops functioning after a predetermined number of uses, or can be accessed only from a specifically licensed geographic location. The implication is not merely that authors can use the technology to expand on copyright law’s default package of rights while rejecting copyright law’s policy-motivated limitations, but also that authors can use the technology to assert control over phone books, databases, and other subject matter that the copyright system would leave in the public domain.

How much of a change this will turn out to be is admittedly a difficult question, but four factors suggest that the change might not be particularly severe. First, hackers have thus far been remarkably effective at defeating digital rights management systems, freeing protected content and rendering implausible the fear that every scrap of content will soon be trapped behind lock and key. Put differently, unauthorized duplication and distribution is a far more pressing problem than is digital rights management; that has been true over the last ten years, and seems likely to remain true for the foreseeable future. Second, consumers seem to disfavor protected content and other rights-limiting technologies, and thus there is significant financial pressure not to adopt digital rights management. Third, even at the theoretical extreme, digital rights management can only be so controlling. It is hard to imagine how any

⁷⁰ 17 U.S.C. §102(b) (excluding from protection ideas, facts, and related non-expressive elements); *Feist Publications v. Rural Telephone Service Company*, 499 U.S. 340 (1991) (discussing and arguably expanding this principle).

technology could stop a person from hearing a song and then later humming it in the shower or creating a humorous parody. Indeed, the Achilles' heel in every system designed to control access to content is that at some point customers must be able to read, hear, or otherwise experience the purchased information. Whenever that happens, the information is necessarily vulnerable. Fourth and finally, content producers do not necessarily want air-tight control over their work in any event, and thus there is no reason to expect that content owners will use extreme forms of digital rights management even if extreme forms were to become available. Magazine publishers, for example, likely benefit from the fact that consumers share magazines, passing a given issue from one friend or family member to another. The reason is that sharing in this manner is a less expensive way to distribute magazines than is the next-best alternative: printing, packaging, and shipping another copy. Thus, as long as a publisher can increase the price of an original magazine to compensate for expected patterns of sharing, the publisher has little incentive to thwart the practice. Sharing makes everyone better off, with both publishers and consumers benefiting from the savings made possible through the use of a cheaper distribution channel.⁷¹

⁷¹ See Stanley M. Besen & Sheila N. Kirby, *Private Copying, Appropriability, and Optimal Copyright Royalties*, 32 *J. L. & Econ.* 255 (1989) (modeling this type of interaction). See also Yannis Bakos, Erik Brynjolfsson & Douglas Lichtman, *Shared Information Goods*, 42 *Journal of Law and Economics* 117 (1999) (arguing that small-scale social sharing is attractive to content producers even in instances where the costs of duplication and distribution are trivial, specifically because small-scale sharing facilitates a subtle form of price discrimination).

The literature on digital rights management typically blurs an important distinction relevant to this question of whether content owners want absolute control: the distinction between perfect price discrimination, where a seller knows exactly how much a given consumer values a given content product and can price accordingly; and control of the sort I discuss in the text, where a seller at best might know how often a consumer listens to a given song, and when, and from where. To be sure, the latter is a proxy for the former, but it is not a substitute. Knowing how often you listen to a given music CD might hint at how much you value it, but there is slippage between these two types of information. Content holders admittedly would love to be able to practice perfect price discrimination. But that does not imply that they also will use technology to

All this is not to dismiss the possibility that digital rights management might someday overstep proper bounds, threatening the host of concessions currently built into federal copyright law and at that moment warranting a response. The question would then become how. One option would be to rely on consumers to develop their own counter-measures, answering new encryption technologies with new decryption techniques, and offsetting increased content control with expanded efforts at unauthorized duplication and distribution. The drawbacks to this approach are many, in that the result is an arms race—recall the discussion on point in the previous section—and, besides, there is no reason to believe that this back and forth will yield anything close to an optimal division between rights and restrictions. Another option would be to regulate encryption technologies directly. The federal government has never explicitly regulated the use of encryption technologies domestically, but there have long been export restrictions in place,⁷² and law enforcement authorities do from time to time urge that manufacturers be required to build backdoors into otherwise-secure telecommunications equipment so as to facilitate government access under appropriate conditions.⁷³ Regulation along these lines might be particularly

exercise complete control. As the magazine example makes clear, control might not be in their interest, even though price discrimination clearly is.

⁷² For detailed discussion, see Tricia E. Black, *Taking Account of the World As it Will Be: The Shifting Course of U.S. Encryption Policy*, 53 *Fed. Comm. L.J.* 289 (2001).

⁷³ For discussion of one such proposal, see Christopher E. Torkelson, *The Clipper Chip: How Key Escrow Threatens to Undermine the Fourth Amendment*, 25 *Seton Hall L. Rev.* 1142 (1995). Eric Posner and I have advanced our own variant on this idea, urging that Internet service providers be obligated to store information at the government's request even in situations where the government cannot at the time convince a court that there is reason to let the government actually look at the stored information. In essence, our argument is that the standard for requiring storage of information should be lower than the standard for allowing inspection of that information, the reason being that the extra storage preserves for society the option to later authorize inspection as new information reveals that to be appropriate. See Douglas Lichtman & Eric Posner, *Holding Internet Service Providers Accountable*, *Supreme Court Economic Review* at n.40 (forthcoming 2005).

effective in the copyright setting because the encryption at issue would be used in mass market products. Regulations targeting criminal or other unlawful encryption, on the other hand, have always been hard to enforce because the relevant products and people were typically operating underground.

A third and more distinctive response to digital rights management might come through the doctrine of copyright misuse. Copyright misuse is an equitable defense to copyright infringement. It immunizes an infringer from liability in cases where the infringer can show that the relevant copyright holder has, in this or some unrelated interaction, used the relevant copyright “in a manner contrary to public policy.”⁷⁴ An example of a copyright holder potentially vulnerable to the defense would be a software firm whose contracts forbid licensees from reverse engineering copyrighted computer code. A court might in response invoke the doctrine of copyright misuse and refuse to enforce the implicated software copyright in any dispute—even one completely unrelated to reverse engineering—until the disfavored practice is stopped and its ramifications on the market undone.⁷⁵

⁷⁴ *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970, 979 (4th Cir. 1990). As copyright misuse becomes a more influential doctrine, courts or Congress will need to sharpen its contours, as a vague inquiry into what is “contrary to public policy” seems dangerously ripe for error, uncertainty, and abuse.

⁷⁵ Marshall Leaffer considers the specific question of whether software owners should be subject to the misuse doctrine on these facts in *Marshall Leaffer, Engineering Competitive Policy and Copyright Misuse*, 19 *Dayton L. Rev.* 1087 (1994). Other commentators have suggested that misuse be used to respond to other forms of overreaching by copyright holders. See, e.g., Lydia Loren, *Slaying the Leather-Winged Demons in the Night: Reforming Copyright Owner Contracting with Clickwrap Misuse* (Working Paper 2004) (on file with author) (misuse should apply in instances where copyright holders assert impermissibly broad rights in contracts and other forms of licensing agreements); Dan Burk, *Anticircumvention Misuse*, 50 *UCLA L. Rev.* 1095 (2003) (misuse should be used to punish copyright holders who abuse the anti-circumvention provisions of the Digital Millennium Copyright Act). Courts today rarely invoke the doctrine; however, the possibility is increasingly being noticed. See, e.g., *Assessment Techs v. WIREdata, Inc.*, 350 F. 3d 640, 647 (2004) (Posner, J.) (musing over the proper boundaries of copyright misuse).

Like any unclean hands doctrine, the principal charm of copyright misuse is that it can be used to discipline behaviors that are difficult to regulate directly. No need to catch a copyright holder actually encrypting his work, or to wait for a specific dispute involving the encryption scheme *per se*. Instead, copyright misuse comes into play the moment the relevant copyright holder turns to the courts for help in enforcing any aspect of the implicated copyright. This is also the central limitation on the doctrine: it has no bite as applied to content producers whose self-help options are so appealing that they have no need for copyright.⁷⁶ Luckily, however, few copyright holders will fall into that category, given that copyright will maintain its importance with respect to certain classes of violations—say, unauthorized public performance—even if it loses its primacy with respect to others.⁷⁷ That is, there is no technology that will stop unauthorized bands from publicly performing songs from Madonna’s latest album; thus, even in a world where Madonna can use encryption to protect her album from unauthorized distribution, she will still turn to copyright to stop other behaviors of which she disapproves.⁷⁸ Misuse could therefore effectively

⁷⁶ The opposite problem also warrants attention: when a court uses copyright misuse to punish a copyright holder for its bad acts, there is no guarantee that the punishment will be remotely proportionate to the crime. Because misuse is an equitable doctrine, however, it is possible that courts can and will address this problem by limiting the instances where misuse can be invoked, or enforcing the copyright to some degree even in instances where misuse rightly precludes complete enforcement.

⁷⁷ This argument does not resonate where the economic value of the work in question can be fully protected by encryption and monitoring technologies. Databases might be one important example. Once encryption technology matures, database owners might not need any additional support from copyright or comparable laws, and thus the threat of misuse and related unclean hands doctrines might not much alter behavior. In such a case, either direct regulation will be necessary, or the unclean hands rules will have to expand to take away other causes of action that might still be valued by the relevant private parties, such as causes of action related to trade secrecy or the enforcement of contracts.

⁷⁸ For ease of exposition, I assume in the text that Madonna holds copyright not only to her sound recordings, but also to the underlying musical works. The analysis does not change if we assume more complicated ownership structures.

pressure Madonna and similarly situated copyright holders to choose between copyright law and self-help, taking away the option of using both regimes to protect any single copyright-eligible work.⁷⁹ The result would be less draconian than an absolute prohibition on self-help because it would leave copyright holders with the option of using self-help instead of law;⁸⁰ and it also would be easier to enforce, given that courts implement the doctrine simply by declining to act when called upon to do so by a disfavored copyright holder.

My discussion thus far has focused on self-help technologies that allow copyright holders to assert greater control over their work. Turn now to the opposing self-help technologies through which college students and other ordinary consumers are themselves shifting legal boundaries, specifically by engaging in the unauthorized duplication and dissemination of copyrighted work online. Copyright law has had a hard time discouraging illegal activities of this sort, the primary reason being that the large number of bad actors makes normal legal process prohibitively expensive. The law could in theory still deter either by significantly increasing the penalties associated with these illegal acts,

⁷⁹ An interesting question to ask is whether misuse should focus on a single work, or should instead treat together several copyrighted works owned by the same private party and perhaps related to one another as either complements or substitutes. The law as it stands applies to each copyrighted work in isolation, but that might not be the right design in a world where copyrighted works are often sold and used in bundles. Then again, a doctrine that lumped several copyrighted works together might unfairly penalize large firms, given that large firms typically own a large number of copyrights.

⁸⁰ As I mentioned earlier—see text near note 75—misuse is less draconian in another way: it allows copyright holders to change their mind, abandon their self-help mechanisms, and return to the protections offered by copyright. The only limitation is that legal protection will not begin again until the effects of the earlier self-help have been fully dissipated. Whether this is a virtue or a defect obviously depends on how strongly society wants to bind copyright holders to their self-help choices.

or by finding some strategy to lower the cost of bringing each individual case.⁸¹ Neither approach, however, holds great promise.

With respect to increased penalties, current penalties for copyright infringement are already quite steep, with statutory damages clocking in at anywhere from \$750 to \$30,000 per work copied,⁸² and criminal prosecution a real possibility thanks to renewed interest from the Department of Justice.⁸³ A college student with a modest collection of illegal music is therefore already being threatened with a possible punishment on the order of five years in jail⁸⁴ and well over \$500,000 in cash damages. It is hard to imagine credibly threatening higher penalties for this category of legal wrong; and, even now, nearly every case settles for a tiny fraction of the maximum possible penalty, presumably because both the government and the copyright industry feel constrained by the possibility of negative publicity.⁸⁵

⁸¹ This understanding of deterrence derives from Gary Becker's original insight that, in instances where the likelihood of detection is low, deterrence can be achieved by increasing the penalty imposed. See Gary Becker, *Crime and Punishment: An Economic Approach*, 76 *J. Pol. Econ.* 169 (1968).

⁸² 17 U.S.C. §504(c). There are upward and downward departures available where infringement can be shown to be either innocent or willful. See *id.* at §504(c)(2) (innocent infringement can be as little as \$200 per work, while willful infringement can be as much as \$150,000 per work).

⁸³ See Saul Hansell, *U.S. Searches Computers, Trying to Disrupt Piracy*, *New York Times*, Aug. 26, 2004 at C4 (describing the Justice Department's intensifying efforts to crack down on illegal file sharing).

⁸⁴ Under the No Electronic Theft Act, there are different offense levels, and each carries its own range of possible sentences. See 18 U.S.C. §2319 (establishing fines and permissible sentence ranges).

⁸⁵ This has another cost: it likely reduces respect for the law. College students are learning the lesson that society will not stick to its guns when it comes to enforcing the law as written or collecting the penalties the law threatens. That might not be particularly important when it is only copyright law at stake, but I wonder if the lesson can be so easily cabined, or if instead the experience with copyright law over these last several years will in the future undermine respect for legal rules more generally.

Meanwhile, although the idea of lowering the costs of legal process resonates in the abstract, in practice none of the plans proposed thus far show much promise. For example, over a several month period in 2003, the Recording Industry Association of America experimented with a streamlined court process wherein copyright holders would present circumstantial evidence of online infringement to a court clerk and, in response, the clerk would issue a subpoena ordering the relevant Internet service provider to reveal the name and address of the accused infringer.⁸⁶ The process was designed to avoid the expense of conducting a full hearing before issuing a subpoena; in particular, it cut corners by relying on a court clerk rather than a judge, and by not offering accused parties the opportunity to defend their anonymity through counsel. The procedure was roundly criticized for fear that it would be too easily abused. Worries included somewhat outlandish concerns that stalkers, pedophiles, and the like would masquerade as injured copyright holders in order to discover the names and addresses of previously anonymous targets; but they also included more plausible privacy and due process concerns over a streamlined process that unmasked anonymous parties without giving them any chance to anonymously resist.⁸⁷ The merits here were never adjudicated; the D.C. Circuit killed the program on the ground that it was not authorized by statute.⁸⁸

⁸⁶ The music industry interpreted a provision of the Digital Millennium Copyright Act to authorize this fast-track procedure. See 17 U.S.C. §512(h) (“A copyright owner or a person authorized to act on the owner’s behalf may request the clerk of any United States district court to issue a subpoena to a service provider for identification of an alleged infringer in accordance with this subsection.”).

⁸⁷ See Amy Harmon, *In Court, Verizon Challenges Music Industry’s Subpoenas*, *New York Times*, Sept. 17, 2003 at C5. It is interesting that Verizon, an Internet service provider, was the most vocal champion of the privacy, due process, and statutory objections. A cynical explanation is that Verizon had ulterior motives given that consumer interest in online piracy likely drives demand for Internet access, and Verizon makes money selling additional phone lines, DSL connections, and Internet service more generally. And, while admittedly Verizon would also earn additional revenues were legal alternatives like iTunes to become more popular, there is no

More recently, Professors Mark Lemley and Anthony Reese have proposed their own fast-track approach,⁸⁹ a dispute resolution system that would keep costs down by allowing a copyright holder to establish a *prima facie* case simply by: (a) submitting a sworn statement asserting that the complaining entity is in fact the relevant copyright holder;⁹⁰ (b) providing evidence that the copyrighted work at issue was available for downloading from a particular Internet address at a particular date and time;⁹¹ and (c) providing evidence linking the implicated Internet address to a particular accused infringer.⁹² If, after such a showing, the accused infringer fails to contest these facts, Lemley and Reese would allow their dispute resolution system to proceed to final judgment. If the infringer instead introduces “a plausible claim of mistaken identification” or other evidence that

incentive for Verizon to choose. Verizon can promote both alternatives, and make money by selling Internet access to legitimate and illegitimate users alike.

⁸⁸ See *RIAA v. Verizon Internet Servs.*, 351 F. 3d 1229 (D.C. Cir. 2003), cert. denied 160 L. Ed. 2d 222 (2004). My own opinion is that the fast-track approach was unnecessarily threadbare—too quick to force Internet service providers to name names, too willing to proceed without opportunities to double-check allegations and otherwise ensure good faith. A better approach would have been to require firms like Verizon to deliver warnings to accused subscribers, reminding subscribers that piracy is illegal and that “the copyright holder might take his evidence to court and, after a hearing where you will have the opportunity to defend yourself anonymously through counsel, the court might order us to reveal your identity and provide further evidence of your alleged bad acts.” Imagine the shiver that would go down an infringer’s spine upon finding that note in his inbox, complete with a specific accusation that the user had downloaded Madonna, last Tuesday, at midnight, from their bedroom computer. Were such warnings delivered quickly, a brief delay before revealing the infringer’s name and address would be less costly, which is to say that copyright holders would on these facts not be significantly harmed by a process that took a little more time to confirm that the accused infringer really should be unmasked.

⁸⁹ Mark Lemley & R. Anthony Reese, *Reducing Digital Copyright Infringement Without Restricting Innovation*, 56 *Stanford L Rev.* 1345 (2004).

⁹⁰ *Id.* at 1414.

⁹¹ *Id.* (“Such evidence could consist of, for example, screen shots showing the availability of files and a sworn statement that the copyright owner determined that the titles listed were actually available and were actually copies of the copyrighted works.”).

⁹² *Id.* (noting that this evidence would typically need to be obtained from the user’s service provider).

casts doubt on the prima facie case, however, Lemley and Reese would refer the case to the federal courts for a fuller hearing.⁹³

The problem with this approach is that it is only trivially cheaper than normal litigation. That is, under the current system, if a copyright holder has evidence of a valid copyright, has evidence that the copyrighted work was made available online without permission, has evidence linking that bad act to a specific person, and faces an accused infringer who is not able or willing to contest any of those factual predicates—the four essential requirements in the Lemley/Reese arbitration—the costs of litigation are already quite small. In fact, such cases typically settle after the first legal document is filed,⁹⁴ and that first document is typically inexpensive given that it is basically a form document that every time recounts the same legal argument, the same basic assertions of wrong-doing, and so on. Framed another way, the costs that make copyright enforcement expensive are the ones to which the Lemley/Reese proposal does not speak: the costs of associating an Internet address with a specific flesh-and-blood person (Internet service providers have this information, but they rarely are willing to provide it absent a court order to do so⁹⁵); the costs of rebutting plausible defenses related to fair use and mistaken identity; and the costs of enforcing judgments.⁹⁶ These costs are admittedly difficult to reduce. But,

⁹³ *Id.* at 1415, 1417 (a plausible claim of mistaken identification is sufficient to have the dispute dismissed without prejudice; certain defenses must be raised in the federal courts after the prima facie evidence is evaluated by an administrative law judge).

⁹⁴ Most of the suits against individual infringers have thus far settled. See, e.g., Jon Healey, *File Sharing Down After Lawsuits*, *Los Angeles Times*, Sept. 30, 200 at C15 (reporting first 54 settlements).

⁹⁵ As I mentioned *supra* note 87, this might be self-serving behavior on the part of the Internet service providers. But it might also be an important dimension along which service providers compete. Consumers, and especially consumers with something to hide, might flock to the provider who most credibly promises not to reveal subscriber identities.

⁹⁶ Lemley and Reese suggest that the costs of enforcing judgments might not be steep. See Lemley & Reese, *supra* note 89, at 1420-1422. If they are right, my criticism still holds. After all,

without such reductions, there is little hope for streamlining the litigation process.⁹⁷

Where deterrence at the individual level cannot work, the typical response is to regulate or in other ways hold accountable parties that facilitate the illegal

the various reasons they list for why enforcement might be cheap in the context of their arbitration process apply with equal force to the normal judicial process. My concern thus remains: I do not see how their approach more than trivially reduces the costs of litigating infringement cases.

⁹⁷ Two other concerns related to the Lemley/Reese proposal bear mention. First, as Lemley and Reese themselves point out, their procedure would work only for large-scale pirates. See *id.* at 1413 n.274. That is a severe limitation, given the obvious evolutionary response: the topography of infringement will change from the current pattern where a small number of users contribute the vast majority of songs, to a new pattern where every user offers up only a handful of songs. The Lemley/Reese arbitration would by virtue of that adjustment be fully de-toothed, and yet little would change in terms of aggregate illegal behavior. Cf. Lior Strahilevitz, *Charismatic Code, Social Norms, and the Emergence of Cooperation on the File-Swapping Networks*, 89 Va. L. Rev. 505 (2003) (discussing ways in which peer-to-peer networks encourage small-scale sharers to increase their participation).

Second and perhaps more important, the Lemley/Reese approach relies on this intuition that (to quote their title) it is possible to “reduc[e] digital copyright infringement without restricting innovation.” That is, Lemley and Reese want copyright holders to be able to hold college students accountable for their illegal use of peer-to-peer technology, and they favor that approach because alternative approaches—like holding technology firms accountable—would reduce the incentive to create and disseminate similar technologies in the future. That sounds right at first blush, but the argument falters when one realizes that their system, too, reduces the incentive to create and disseminate these technologies, because the real spur to innovation here is copyright infringement. Phrased another way, if I am wrong in my criticisms thus far and the Lemley/Reese proposal does significantly deter copyright infringement by making available an arbitration system, the incentive to create and disseminate the next Napster will be ruined anyway. The average person will not pay a scrap of attention; the overwhelming reason why people download these sorts of new technologies and experiment with them is simply to get access to copyrighted songs. Without infringement driving demand, these technologies die on the vine. The Lemley/Reese argument thus strikes me as a bit unfair. Their article criticizes other approaches on the ground that those approaches reduce the incentive to innovate, but the article never concedes that the arbitration approach suffers a very similar flaw. Indeed, my own hunch is that an effective arbitration system would do more damage than would other approaches, in that the threat of arbitration would discourage college students from playing with these technologies, thus ruining the precise mechanism that brought us file-sharing software in the first place. The better approach is to hold responsible the firms that profit from infringement online, perhaps forcing them to pay modest damages or requiring that they design their systems in ways that better respect copyright rights. That would protect copyright to some degree, but still recognize in the college students a certain freedom to tinker.

practice.⁹⁸ Copyright holders have obviously attempted that strategy, perhaps most notably through high-profile litigation against Internet startups Napster,⁹⁹ Aimster,¹⁰⁰ and Grokster.¹⁰¹ Much has already been written on these particular cases,¹⁰² as well as on the general issues they raise,¹⁰³ and I will therefore keep my remarks on this topic short. I want to emphasize, however, that these are difficult cases because the technologies at issue are capable of both legitimate and illegitimate use. That is important as a matter of copyright doctrine—a decade ago, the Supreme Court found manufacturers of video cassette recorders immune from copyright liability primarily on the ground that VCRs are “capable of substantial noninfringing uses”¹⁰⁴—and as a matter of policy as well, in that courts when faced with dual-use technologies must be careful not to regulate in a way that unnecessarily discards the wheat with the chaff. At the same time, caution should not be allowed to morph into paralysis, especially in instances where small modifications to the relevant technology could reduce the number

⁹⁸ For a general introduction to the economics of indirect liability, see Lichtman & Posner, *supra* note 73 (discussing the intuitions and limitations, and then applying those concepts to the question of whether Internet service providers should be held liable for their role in propagating viruses, worms, and other forms of Internet mischief).

⁹⁹ *A&M Records Inc. v. Napster, Inc.*, 239 F. 3d 1004 (9th Cir. 2001).

¹⁰⁰ *In re Aimster Copyright Litigation*, 334 F. 3d 643 (7th Cir. 2003).

¹⁰¹ *MGM Studios, Inc. v. Grokster Ltd.*, 380 F.3d 1154 (9th Cir. 2004).

¹⁰² For one early and insightful discussion, see Stacey L. Dogan, *Is Napster a VCR? The Implications of Sony for Napster and Other Internet Technologies*, 52 *Hastings Law Journal* 939 (2001).

¹⁰³ See, e.g., Randal C. Picker, *Copyright as Entry Policy: The Case of Digital Distribution*, 47 *Antitrust Bull.* 423 (2002); Douglas Lichtman & William Landes, *Indirect Liability in Copyright: An Economic Perspective*, 16 *Harv. J. Law & Tech* 395 (2003); Lemley & Reese, *supra* note 89; William Fisher, *Promises to Keep: Technology and the Future of Entertainment* (2004); Neil W. Netanel, *Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing*, 17 *Harv. J. L. & Tech.* 2 (2003).

¹⁰⁴ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 442 (1984).

of illegitimate acts without substantially interfering with legitimate ones, or substantially altering the core underlying technological accomplishment.¹⁰⁵

Let me unpack those concerns just slightly further. In *Sony Corporation of America vs. Universal City Studios, Inc.*, the Supreme Court held that “the sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes. Indeed, it need merely be capable of substantial noninfringing uses.”¹⁰⁶ Bill Landes and I have criticized this holding along two dimensions. First, read literally, it fails to account for the costs and benefits of the technology at issue, excusing from liability even a product for which expected harms fully overwhelm expected benefits. There are admittedly reasons not to engage in too careful a cost/benefit balance. It might be difficult for a court to predict future uses of a new technology; and some harmful uses ought not count given that they can be better addressed through other forms of intervention, such as direct litigation against the relevant bad actors and self-help.¹⁰⁷ However, on

¹⁰⁵ Applause on this score to the district court in the Northern District of California that ordered Napster to undertake narrow, specific efforts to exclude copyrighted music from Napster’s master list of available downloads. For example, the court ordered Napster to block titles explicitly identified by copyright owners as ones being traded or likely to be traded on the network. And, recognizing that clever users would respond by introducing obvious typographical errors into song titles—one popular approach was to list each title in pig Latin—the court ordered Napster to “use reasonable measures in identifying variations of the filename(s), or of the spelling of the titles or artists’ names, of the works identified by plaintiffs.” *A&M Records, Inc. v. Napster, Inc.*, 2001 U.S. Dist. LEXIS 2186, at *5 (2001) The *Grokster* court, by contrast, declined to issue an injunction of this sort, not even broaching the question of whether a peer-to-peer system could be modified in ways that would encourage respect for copyright law without sacrificing the distinct benefits of peer-to-peer architecture. See *Grokster*, supra note 101, at *29.

¹⁰⁶ *Sony*, 464 U.S. at 442.

¹⁰⁷ See Lichtman & Landes, supra note 103, at 400-01, 404-07. But see Lemley & Reese, supra note 89, at 1389 n.171 (agreeing that these various issues must be considered, but expressing doubt that courts can establish a standard or presumptions that would adequately account for them).

its face, the *Sony* rule requires no balancing at all; and, if that reading is correct, it seems an unduly paranoid approach.¹⁰⁸

Second, the *Sony* rule creates no incentive for firms to try to protect copyright. Instead, it offers blanket immunity the moment a firm can demonstrate sufficient legitimate use, completely ignoring any possibility that the firm could have done better. An analogous approach in criminal law would be to announce that anyone who does two good deeds in the morning is free to commit any number of bad acts in the afternoon. Such a rule is ridiculous because it does nothing to discourage afternoon malfeasance; but the *Sony* rule does exactly that with respect to infringement. Again, there are admittedly reasons not to be too aggressive in terms of allowing courts to micro-manage the development of new technologies. The *Sony* rule, however, has been read to contemplate no court evaluation at all. Just as courts are able to evaluate the complicated technology issues that arise in the context of the patent system,¹⁰⁹ and courts are able to evaluate questions of product design in the context of products liability litigation,¹¹⁰ courts working in the copyright setting could be expected to evaluate whether technology firms were (say) reckless in their failure to adopt additional copyright protections. This is therefore a second dimension along which a literal reading of the *Sony* rule seems overly cautious.¹¹¹

¹⁰⁸ What technology fails the *Sony* test? If none do, that would seem inconsistent with *Sony* itself, as the original opinion emphasizes the need to balance the interests of copyright holders against the interests of technology entrepreneurs.

¹⁰⁹ See Arti K. Rai, *Specialized Trial Courts: Concentrating Expertise on Fact*, 17 *Berkeley Tech. L.J.* 877 (2002) (discussing structural solutions to the problem of scientific complexity in patent cases).

¹¹⁰ See, e.g., Restatement (Third) of Torts at §2(b) (a product “is defective in design when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller”).

¹¹¹ More concretely, why not require that firms involved with peer-to-peer software assist copyright holders in deploying decoy files? The firms might be required to use idle cycles on their servers to dish out fake files. The firms might in addition be forbidden from taking steps to

Issues left unresolved in *Sony* raise similar complexities. Consider, for example, the question of which legitimate uses should count as “substantial noninfringing uses” for the purposes of the *Sony* balance. In my view, a use should count only if it is both lawful and sincere, which is to say that the use is both technically permissible as a matter of law, and also a use for which the technology at issue has plausible charm. Grokster could in theory be used to disseminate copies of the Bible. That would be lawful, as there is no copyright in the Bible, but not sincere, in that there are so many equally good ways to acquire a copy of the Bible—websites that post free copies online, religious institutions in every community that offer free copies in print, hotel rooms where the Bible can routinely be found in a drawer—that there is little reason to defend the ability to acquire a copy through Grokster per se. Grokster similarly cannot be defended on the argument that peer-to-peer file sharing helps strangers recommend new music one to another, because suggestions could be made without actually offering the music files at the same time. Nor can KaZaA be defended as a mechanism for new artists to introduce their work, given that free centralized websites—like the original mp3.com¹¹²—can easily be used as centralized repositories for music that is willingly placed in the public domain. Phrased another way, a legitimate use must be evaluated in light of plausible alternative means to accomplish the same end result. This is an important detail left

interfere with decoys. Again, the *Sony* rule as interpreted today does not allow courts to even think in these directions; and that seems hard to defend. See Lichtman & Landes, *supra* note 103, at 400-01, 404-07.

¹¹² See Keith L. Alexander, Music firm Mp3.com hits IPO high note, *USA Today*, July 21, 1999, at 3B (reporting on the website’s success as a forum for unknown artists to unveil their work). Unfortunately, this particular website lost significant ground when it changed focus and began to offer music management services that were ultimately found to infringe copyright. See Christopher Grimes, MP3.com will pay Dollars 53m to Universal, *Financial Times*, Nov. 15, 2000, at 21 (discussing litigation and settlement).

unmentioned in the *Sony* decision, and a detail that the appellate courts seem also to have thus far overlooked.¹¹³

As for still other responses to the various self-help technologies that facilitate consumer infringement, federal law offers a potpourri of approaches. One provision of the Digital Millennium Copyright Act encourages Internet service providers to remove allegedly infringing content by immunizing service providers from liability for wrongful removals made in good faith.¹¹⁴ Another provision immunizes from copyright liability search engines like Google and Internet intermediaries like eBay, but only on the condition that they act expeditiously to remove infringing content from their sites the moment they are made aware of its existence.¹¹⁵ Yet another forbids any firm from manufacturing, importing, or in other ways offering to the public any technology that is primarily designed to break an encryption scheme that would otherwise protect copyrighted work from unauthorized distribution.¹¹⁶ Even the Federal Communications Commission has tried its hand at protecting copyrighted work; the Commission recently promulgated a series of regulations that require manufacturers of television and cable hardware to build into their equipment

¹¹³ See *Grokster*, supra note 101, at 16 (counting as a legitimate use the authorized distribution of music from the band Wilco, without even considering Wilco's next-best options for online distribution). The Seventh Circuit attempted to add teeth to the term "legitimate use" in another way: that court demanded a threshold showing of current, actual legitimate uses before being willing to entertain stories of hypothetical future legitimate uses. See *Aimster*, supra note 100, at 652-53.

¹¹⁴ 17 U.S.C. §512(g)(1).

¹¹⁵ 17 U.S.C. §§512(c)(1), (d)(1), (d)(3).

¹¹⁶ 17 U.S.C. §§1201(a)(2) & (b)(1).

certain technologies that restrict the unauthorized redistribution of copyrighted television content.¹¹⁷

All of these strategies have advantages and drawbacks.¹¹⁸ What is interesting about them, however, is their sheer diversity. Because consumers have this new ability to assert unilaterally the power to duplicate and distribute copyrighted work online, copyright law has had to fight back by: using immunities to entice various parties to do their part in enforcing the law; banning some technologies even though those technologies might have substantial legitimate uses;¹¹⁹ and imposing by regulation specific design requirements for the next generation of television equipment. And, because all this is only working so well, there are proposals on the table to do still more—such as permitting copyright holders to engage in otherwise-illegal denial-of-service attacks as a means by which to bring down servers that are distributing copyrighted work illegally,¹²⁰ and authorizing

¹¹⁷ See Implementation of Section 304 of the Telecommunications Act of 1996, 18 FCC Rcd. 20885 (2003) (copy controls for cable television hardware); Digital Broadcast Content Protection, 18 FCC Rcd. 23550 (2003) (“broadcast flag” for broadcast content).

¹¹⁸ The ban on the sale of anti-circumvention devices, for example, likely has significantly reduced piracy by making it more difficult for the average consumer to acquire decryption tools. At the same time, however, the ban sweeps broadly, keeping off the market tools that have substantial legitimate uses. Worse, the ban has introduced opportunities for abuse, as where the manufacturer of automatic garage doors endeavored to use the provision to stop rival firms from making competing, compatible door openers. See *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 2004 U.S. App. LEXIS 18513 (2004). Whatever one thinks about the merits of that dispute—whether there should be competition for the provision of garage door openers or instead those openers should be sold exclusively by the firm that manufactures the relevant garage door—it is clear that the Digital Millennium Copyright Act was not designed to address that issue.

¹¹⁹ The Digital Millennium Copyright Act bans technologies “primarily designed” for circumvention, with “only limited commercially significant purpose” other than circumvention, or “marketed . . . for use in” circumvention (17 U.S.C. §1201(a)(2)) whereas the *Sony* standard more generously immunizes any technology that is “capable of substantial noninfringing uses.” *Sony*, 464 U.S. at 442.

¹²⁰ See Chris Marlowe, California Congressman Backs Illegal Anti-Piracy Tactics, *Hollywood Reporter*, June 27, 2002 (reporting Representative Howard Berman’s proposal to legalize, among other tactics, the strategy of flooding computers engaged in unauthorized file swapping with large numbers of disingenuous file requests).

copyright holders to unleash self-help computer viruses that would detect and destroy copyrighted music that is being offered for free by unauthorized sources.¹²¹ In short, copyright law—perhaps more than any other field of law—has been and continues to be under enormous pressure to react to self-help measures.

IV. Patent Nonuse

Suppose that a burglar were to invent and patent an effective home security system, but then refuse to license the technology to others (or to sell it himself) because security systems interfere with burglary. If another inventor were to come up with the same system, should courts enforce the patent and thus bar the second inventor from making, using, or selling the security system; or on these facts should a court refuse to enforce the patent because to enforce it would be to indirectly facilitate the illegal act of burglary? More broadly, should a patent holder be permitted to use the patent system to suppress a self-help technology where there is evidence that the patent holder is motivated by a desire to profit from the very illegal activity that the self-help technology would otherwise combat?

The above is obviously a hypothetical, but the fact pattern is not so far-fetched. In my earlier discussions,¹²² I introduced the idea of using decoy files to interfere with the unauthorized distribution of copyrighted music online. Again, the intuition is that copyright holders can infiltrate a file-sharing network like Grokster, offer up mislabeled or corrupt music files, and in that way trick users

¹²¹ See Crystal Yednak, *Retribution Technology*, Chicago Tribune, June 19, 2003 at 3 (discussing proposal by Senator Orrin Hatch to allow copyright holders to use viruses to destroy files and computers involved in unauthorized file sharing). I discuss proposals like this in greater detail *infra* Part IV.

¹²² See *supra* note 56 and accompanying text.

into downloading undesirable songs. A college student searching for the latest Madonna tune might by virtue of this strategy accidentally download Kenny G; and, if that pattern were to repeat with sufficient frequency, the net effect would be to make illegal music significantly less attractive at the margin. What I did not mention is that there are patents that purport to cover the implementation of this strategy.¹²³ What would happen if a firm with financial ties to Grokster or KaZaA were to come into possession of those patents? Is this the burglar hypothetical actually realized?¹²⁴

Patent holders in general are under no obligation to make, use, or sell their patented inventions;¹²⁵ and many patent holders in fact opt to hold even valuable inventions idle for strategic reasons. Stuart Newman, for example, is currently involved in a high-profile fight to patent the first human/animal chimera. He is pursuing the patent because he has a moral objection to this line of research and wants to use the patent to stop others from investigating these hybrids for the duration of his exclusive rights.¹²⁶ Similarly, in the 1960s, the Liggett & Myers

¹²³ See, e.g., U.S. Patent No. 5,978,791 (a mechanism for uniquely identifying digital files); U.S. Patent No. 6,732,180 (covering the strategy of increasing or decreasing the number of decoy files available in response to current network conditions). My own suspicion is that each of these patents will be found obvious in light of prior art to which the relevant patent examiners did not have access.

¹²⁴ There is reason to believe that this scenario is in fact playing out right now in the federal courts. See Jon Healey, *RIAA Is Accused of Patent Violations*, Los Angeles Times, Sept. 9, 2004, at C3 (reporting the filing of a patent infringement suit by Altnet against several firms that allegedly employ the decoy strategy; Altnet has a longstanding business relationship with KaZaA).

¹²⁵ See, e.g., *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 429 (1908) (“exclusion may be ... the very essence of the right conferred by the patent, as it is the privilege of any owner of property to use or not use it, without question of motive”).

¹²⁶ See Mark Dowie, *Talking Apes, Flying Pigs, Superhumans with Armadillo Attributes, and Other Strange Considerations of Dr. Stuart Newman’s Fight to Patent a Human/Animal Chimera*, *Mother Jones* (Jan-Feb 2004) at 47. The idea of a private party using the law to impose his moral or political judgments on others is not unique to patent law. Consider tradable emission credits. Environmental groups and other interested parties can compete with firms to purchase these credits but then retire them; the effect is to reduce the maximum level of pollution from that which the law originally contemplated to some lower level. See James C. Nicholas &

Company suppressed a patented cigarette that was arguably less carcinogenic than contemporary alternatives. The firm was apparently concerned that the existence of a safer cigarette would call into question the safety of cigarettes more generally, sharply reducing industry profits.¹²⁷ Technology firms also routinely acquire and then suppress patents on technologies that are closely related to their existing products. The motivation in these cases is to preserve demand by stopping competitors from inventing and marketing substitute goods.¹²⁸ Courts forbid none of these strategies; and that might suggest that our burglar should similarly be free to withhold his security system from the market.

Nevertheless, consider some analogies from outside patent law. A mugger cannot come to court and complain that his would-be victim used force to resist the mugging, even though the use of force is in most settings clearly prohibited. The privilege of self-defense removes the specter of liability in such an instance, because on policy grounds society long ago decided that, in certain circumstances, victims should be allowed to answer aggression with aggression. The self-defense privilege is highly fact-specific. It immunizes only those responses that are necessary to avoid imminent physical harm;¹²⁹ it extends only to responses that are proportionate to whatever harm the victim is seeking to

Julian Conrad Juergensmeyer, *Market Based Approaches to Environmental Preservation: To Environmental Mitigation Fees and Beyond*, 43 *Nat. Resources J.* 837, 848-51 (2003). On the general question of when a private party can unilaterally decide to remove a resource from public use, see Lior Jacob Strahilevitz, *The Right to Destroy*, 114 *Yale L. J.* (forthcoming 2005).

¹²⁷ See Kurt M. Saunders, *Patent Nonuse and the Role of Public Interest as a Deterrent to Technology Suppression*, 15 *Harv. J. Law & Tech* 389, 393 (2002).

¹²⁸ See Saunders, *supra* note 127, at 409-417 (offering several historical examples). This practice is arguably consistent with patent law's general goal of encouraging innovation. By allowing firms to build a fence around their original products, the patent system increases the value of those original products and thus increases the *ex ante* incentive to invest in their development. Indeed, the policy arguments for and against this practice largely mirror the arguments for and against awarding broad patent rights in the first place.

¹²⁹ Restatement 2d of Torts, at § 63(1).

avoid,¹³⁰ and it is fully lost if the victim fails to exhaust all “reasonably safe means of preventing” the original aggression.¹³¹ But the privilege makes clear that, while the use of force is in general frowned upon, there are instances where force is a socially justified self-help response. Without such a privilege, an absurd result would obtain: criminal law would facilitate violent attacks by discouraging violent responses.

The Digital Millennium Copyright Act provides another example on theme. A website owner who posts on his website what seem to be infringing materials cannot complain if, upon noticing those materials, an Internet service provider chooses to disable access to the site. The reason is a provision of the Digital Millennium Copyright Act that immunizes Internet service providers from “any claim based on the service provider’s good faith disabling of access to, or removal of, material or activity claimed to be infringing . . . regardless of whether the material or activity is ultimately determined to be infringing.”¹³² Unlike the more nuanced self-defense privilege, in this case legal liability is brushed aside upon a mere showing of good faith. That standard is much easier to meet than the negligence standard that would apply were the service provider sued for its actions under a theory like (say) tortious interference with a business relationship. But the lower standard is arguably justified in this instance for two reasons. First, there is not a strong need for legal liability in this setting, because Internet subscribers can discipline service providers that disable content

¹³⁰ *Id.* at comment j.

¹³¹ *Id.* at comment l. Interestingly, there is no obligation to retreat, nor to comply “with a command with which the actor is under no duty to comply or which the other is not privileged to enforce by the means threatened.” *Id.* at §63(2).

¹³² 17 U.S.C. §512(g)(1).

needlessly, specifically by changing providers.¹³³ Second, even with immunity, there is little risk that service providers will impose substantial harm, the reason being that the statute goes on to carefully articulate several next steps for an Internet service provider to take, requiring (among other things) that the service provider notify the party whose content has been removed¹³⁴ and reestablish access to the material in ten business days if the implicated copyright holder has not in that time successfully petitioned a court for injunctive relief.¹³⁵

Even contract law has safety valves that would likely be applicable in situations where the only plausible purpose of a contract provision is to interfere with self-help and thereby indirectly facilitate illegal activity. For instance, Sharman Networks—the firm responsible for the peer-to-peer software, KaZaA—includes in its standard software license a term that explicitly forbids users from intentionally uploading “spoofed or corrupted files or files with information designed to misidentify the actual content of the file.”¹³⁶ But does anyone really believe that a court would enforce that provision against a copyright holder who downloads the KaZaA software and then violates the license by posting decoy files designed to stop users from infringing that author’s copyrighted works?¹³⁷ The provision would in that setting surely be void as against public policy; there is no legitimate reason for Sharman to object

¹³³ Although there are many externalities at play, and thus the market is not a perfect check on Internet service provider behavior. See Lichtman & Posner, *supra* note 73.

¹³⁴ 17 U.S.C. §512(g)(2)(A).

¹³⁵ *Id.* at §512(g)(2)(C).

¹³⁶ See <http://www.kazaa.com/us/terms.htm> at 2.15 (last checked on October 1, 2004).

¹³⁷ Sharman has in fact filed suit on exactly this theory. See Jon Healey, *Kazaa Owner Cleared to Sue Record Labels, Movie Studios*, *Los Angeles Times*, Jan. 23, 2004 at C1 (reporting status of litigation between Sharman and the Recording Industry Association of America).

to decoy files as long as those files interfere with illegal activity but do not substantially interfere with legitimate file exchange.¹³⁸

Copyright holders have in recent years lobbied for additional immunities along these lines, although the proposals have all been controversial.¹³⁹ For example, under current law, it is illegal to “knowingly [cause] the transmission of a program, information, code, or command, and as a result of such conduct, intentionally [cause] damage without authorization”¹⁴⁰ to a computer “used in interstate or foreign commerce or communication”¹⁴¹ where the damage represents a “loss to 1 or more persons during any 1-year period . . . aggregating at least \$5,000 in value.”¹⁴² Because of this law, a copyright holder who identifies a server engaged in unauthorized file sharing might not be allowed to interfere with the server by flooding it with disingenuous download requests. Those requests would arguably “intentionally [cause] damage without authorization” and that damage would be actionable if its economic consequence were to reach the statutory threshold.

But perhaps this is a form of self-help that ought to be condoned. Residual liability—for instance, the obligation to pay for injuries caused in instances where it is later shown that the network being targeted was actually being used for predominantly legitimate purposes—could be used to encourage due care. In fact, copyright holders could be required to post a bond before engaging in this

¹³⁸ See *Interface Group-Nevada v. TWA*, 145 F.3d 124,135 (3rd Cir. 1998) (“Contracts that are void as against public policy are unenforceable regardless of how freely and willingly they were entered into.”); Restatement (2d) of Contracts, Chapter 8 (Introductory Note) (sometimes court will refuse to enforce a contract because doing so would be “an inappropriate use of the judicial process in carrying out an unsavory transaction”).

¹³⁹ I briefly mentioned two of these proposals *supra* notes 120-121 and accompanying text.

¹⁴⁰ 18 U.S.C. §1030(a)(5)(A)(1).

¹⁴¹ 18 U.S.C. §1030(e)(2).

¹⁴² 18 U.S.C. §1030(a)(5)(B)(i). Other qualifying harms include physical harms and threats to public health or safety. 18 U.S.C. §1030(a)(5)(B)(i)-(v).

kind of denial-of-service attack, thereby ensuring that cash would be available in the event of a court-ordered payment.¹⁴³ Crafted in this manner, a balanced partial immunity might be an attractive mechanism by which to empower copyright holders to defend their own interests. There are admittedly substantial costs to weigh; immunity would exacerbate the arms race between copyright holders and infringers, and even good faith efforts will inevitably impose at least some uncompensated harm on innocent parties. But self-help in this setting is attractive both because it is flexible enough to quickly react to a changing threat landscape, and because it can be designed with considerable nuance—for example, flooding a network with decoys only when the number of illegal files exceeds a certain threshold, and automatically scaling back the decoy effort as soon as the illegal behavior recedes. An absolute ban on this style of defensive measure thus would mistakenly treat a valuable form of self-help as on par with purely wasteful forms of Internet mischief.¹⁴⁴

Return now to my patent law examples, and the question of whether patent law presents issues that are meaningfully different from those presented in the contract, tort, and criminal law settings. One difference might be that there are stronger checks on patent misbehavior. My burglar, for example, might be reluctant to patent his new security system because the very act of disclosing the idea in a patent application might prompt other inventors to come up with comparable or better systems that fall outside the scope of the patent. The

¹⁴³ The Berman proposal took steps in this direction, specifically by proposing that copyright holders be required to notify the Department of Justice prior to engaging in self-help, and that they be liable for damage caused to legitimate interests. See Beth A. Thomas, *Solutions are on Track: Digital File Sharing Spun in a Positive Light*, 6 *Vand. J. Ent. L. & Prac.* 129, 142 (2003).

¹⁴⁴ I should say that I myself prefer decoy strategies to these denial-of-service approaches, and I would only favor the latter strategy if it turns out that decoys are ineffective. My preference stems from the elegance of the decoy strategy: decoys interfere with infringing files but are unlikely to much interfere with legitimate downloading activities.

burglar on this story would be better off keeping his technology quiet. On the opposite story, too, the patent system seems to fare well: if the security system turns out to be so revolutionary that other inventors are not able to come up with effective substitutes even after reading the patent disclosure, then the patent should create a huge incentive for the burglar to change occupations and start selling home security. After all, on those facts, the patented technology is likely worth a fortune.¹⁴⁵

Then again, maybe these arguments are not as compelling as they at first appear. With respect to the risk of disclosure, the information available on the face of a patent document is rarely revealing. As a frustrated Supreme Court once expressed, patent applicants have over time mastered “the highly developed art of drafting patent [disclosures] so that they disclose as little useful information as possible” and, thus, any “argument based upon the virtue of disclosure must be warily evaluated.”¹⁴⁶ I do not mean to imply here that the patent system does not encourage disclosure in a typical case. Of course it does. Where an inventor is interested in profiting from his invention, a patent removes the worry that the idea will be stolen and thus frees the inventor to scream his idea from the mountaintops. In an instance where an inventor hopes to suppress his invention, however, dynamic disclosure of this sort will not occur, and in those cases the patent system is likely not particularly effective at disseminating information. It is therefore probably wrong to think that our burglar would be

¹⁴⁵ The social costs of burglary can also be addressed by ramping up efforts to catch and punish burglars. I do not mention that limitation in the text because it is not a consideration unique to the patent system. The same point argues against the privilege against self-defense, the immunity offered to Internet service providers, and so on. In every instance, it is obviously true that the relevant self-help technique would be unnecessary if the underlying legal rule could be enforced more aggressively.

¹⁴⁶ *Brenner v. Manson*, 383 U.S. 519, 534 (1966).

reluctant to patent his new security system for fear that the act of disclosing the idea in a patent application will inspire competing inventions.

As for my argument related to the value of the patent, meanwhile, there admittedly is some price at which the burglar would sell his patent to a group of concerned homeowners or himself begin marketing the technology, and thus a state of affairs where the burglar is still suppressing the technology might merely be evidence that homeowners have yet to offer an adequate sum. But it is not entirely clear that allowing this type of ransom payment is good policy, because it in essence puts law up for auction. Consider the patents related to music decoys. If infringers end up being willing to pay more for those patents, infringement will continue; if copyright holders are willing to pay more, infringement will stop. But copyright law must promise more to authors than merely the right to participate in an auction where the winner decides whether copyright is respected or ignored.

In the end, the right answer here will largely turn on whether courts can predictably and accurately exercise discretion in cases like the burglar hypothetical. Courts would need to be able to distinguish instances where a patent holder is attempting to profit from the patented invention, which presumably should be allowed, from instances where a patent holder is instead attempting to protect profits that derive from some underlying illegal act, which probably should not be. That is, a court should enforce a patent where the patent holder developed an innovative self-help mechanism, patented it, and is now using that technique or trying to license others to do so. In such a case, the patent system is serving its traditional role of encouraging innovation by creating an exclusive right to make, use, or sell an original invention. But a court should at least hesitate in an instance where the patent holder has developed an innovative

self-help mechanism, patented it, and is now refusing to use or license that invention. This is not to say that refusals to use or license are always illegitimate. As I mentioned, a patent holder might be keeping one patent off the market in order to increase the value of another, or intentionally retiring a technology to which the patent holder has a moral objection. But such refusals should at a minimum be viewed with skepticism where they are motivated by a desire to profit from the very illegal activity that the patented self-help technique would combat. Under that fact pattern, the patent is at best only weakly serving the patent system's traditional goals of encouraging the development and dissemination of new technologies. Thus, if society is sincere in its characterization of the underlying act as illegal, and if society has confidence that these cases can be reliably distinguished from other instances of patent nonuse—and that latter “if” is admittedly a big one—courts arguably can¹⁴⁷ and likely should¹⁴⁸ refuse to enforce any implicated patents.

V. Conclusion

The theme of this conference is that technology brings a new urgency to the question of how legal rules account for and respond to private self-help

¹⁴⁷ See, e.g., *Keystone Driller Co. v. General Excavator Co.*, 290 U.S. 240, 245 (1933) (reaffirming, in the context of a patent dispute, the equitable principle that “whenever a party who, as actor, seeks to set the judicial machinery in motion and obtain some remedy, has violated conscience, or good faith, or other equitable principle, in his prior conduct, then the doors of the court will be shut against him in limine; the court will refuse to interfere on his behalf, to acknowledge his right, or to award him any remedy”)(quoting Pomeroy, *Equity Jurisprudence*, 4th ed., § 397); *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488, 494 (1942) (“The patentee ... may not claim protection of his grant by the courts where it is being used to subvert public policy.”).

¹⁴⁸ Note that there are several plausible approaches that are less severe than a complete refusal to enforce a suspect patent. For example, a court could impose a reasonable royalty. Or, if the courts are unable to make these determinations with sufficient accuracy, the government could condemn particularly troubling patents and then offer fair compensation. These more forgiving approaches reduce the importance of mistakes in that they offer the patent holder at least some financial reward, rather than turning the patent holder away empty-handed.

mechanisms. The link is not only that technology creates new opportunities for self-help—think here of encryption serving to increase a copyright holder’s ability to control his work, or Internet filters arming consumers with new tools against offensive communications online—but also that technology expands the need for self-help, primarily because formal legal rules will often prove too slow to respond to emerging technological threats. My purpose in this Essay was to present some case studies that shed light on the issues that these new technologies will raise, specifically by highlighting and evaluating the ways in which legal rules encourage, harness, deter and indeed defer to self-help.

The primary payoff to this work, in my view, is that these various case studies make clear the rich variety of options available, from supportive approaches that cast self-help as a necessary prerequisite to more formal legal process—think here of the rule in trade secret law that protects secrets only if they were revealed despite reasonable self-help precautions—to less welcoming alternatives, like the copyright doctrine that forces authors to choose between encryption and copyright, rather than allowing an author to rely simultaneously on both. As my discussions have emphasized, the theories that underlie these approaches vary considerably. Thus, the task of choosing the right approach for a particular setting in the end requires a careful look at that specific application, rather than any generic rule that might apply across the board. This is in fact the main reason why I was in this Essay attracted to the case study approach. In my view, it is only by delving into each particular example that one can really understand what work self-help can accomplish, and what instead is best left for government actors and institutions.

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