Property Rights to Information

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By Jamie Lund*

I. INTRODUCTION

This paper proposes an enforceable property right over one’s own personal information. People require accurate information to structure their lives—to make intelligent decisions on issues as mundane as choosing a microwave or even to participate in and contribute to a democratic society. “Information pollution,” particularly misinformation, threatens the efficient fulfillment of these processes by contaminating the available pool of information with falsehoods, thus delaying or preventing everyone else from discovering the truth about the subject.  

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2 See NLRB v. Robbins Tire & Rubber Co, 437 U.S. 214, 242 (1978) (stating that the FOIA’s purpose “is to ensure an informed citizenry, vital to the functioning of a democratic society, needed to check against corruption and to hold the governors accountable to the governed”); Thornhill v. State of Alabama, 310 U.S. 88, 101–02 (1940) (“The freedom of speech and of the press guaranteed by the Constitution embraces at the least the liberty to discuss publicly and truthfully all matters of public concern without previous restraint or fear of subsequent punishment. The exigencies of the colonial period and the efforts to secure freedom from oppressive administration developed a broadened conception of these liberties as adequate to supply the public need for information and education with respect to the significant issues of the times.”). The ideas presented to a passive audience are often accepted, therefore influencing large groups into conforming behind ideas, meaning that the media exerts a significant influence over audiences. Under Cultivation Theory, those who spend more time watching television are more likely to perceive the real world in ways that reflect that television world. These individuals are compared with people who watch less television, but are otherwise comparable in terms of important demographic characteristics. George Gerbner et al., Living with Television: The Dynamics of the Cultivation Process, in PERSPECTIVES ON MEDIA EFFECTS 17–40 (Jennings Bryant & Dolf Zillman eds., 1986). As a top down, linear, closed communication model, Cultivation Theory regards audiences as passive, presenting ideas to society as a mass entity with their meaning open to little or no interpretation.  
3 Information pollution has been defined as “the contamination of information supply with incomplete, inconsistent, or irrelevant information.” Levent Orman, Fighting Information Pollution with Decision Support Systems, 1 J. MGMT. INFO. SYS, 64, 64–71 (1984).  
4 Vinton G. Cerf, Internet and the Justice System, 79 Wash. L. Rev. 25, 29-30 (2004) (“Bad information propagates as fast or faster than good information. . . . Once information pollution has occurred, correcting the problem is not unlike trying to put toothpaste back into the tube through the small dispensing end!”).  
5 The parallel between environmental pollution and information pollution is made explicitly in David A. Bray, Information Pollution, Knowledge Overload, Limited Attention Spans, and Our Responsibilities as IS Professionals (Global Info. Tech. Mgmt. Assoc. (GITMA) World Conference, June 2008), available at http://ssrn.com/abstract=962732:
Modern media is particularly susceptible to harm from information pollution. Modern media suffers from a tragedy of the commons caused by users’ disseminating information without bearing the cost of spreading misinformation. Moreover, the harm from information pollution from modern media is greater than traditional media because of the potential permanence of digital misinformation.

This paper proposes a property right over personal information that is verifiably true and not subject to dispute, such as the telephone number of a business or one’s country of citizenship. Should a publisher misrepresent protected information, the rights-holder would have the power to demand a retraction, an amendment to a webpage, or some other remedy that would correct the information without imposing punitive damages on the publisher. Allowing individuals to police their own section of the pool of information would enable a self-enforcing reduction in information pollution, improving the quality of information for everyone.

II. MODERN MEDIA, THE INFORMATION COMMONS, AND WHAT’S AT STAKE

The harm from information pollution for modern media is potentially vast. Unique characteristics of modern media which have exponentially expanded access to information and facilitated the creation of information also exacerbate problems from information pollution. First, modern media suffers from a “tragedy of the commons” problem, because the public can use it freely at no cost to anyone individually. Because it is a commons, there is both a diminished incentive to maintain standards about what types and quality of information will be published and a corresponding decrease in the value of the common to its users. Second, misinformation is particularly harmful because it may last forever, or, at least, the nature and length of its existence is difficult to anticipate or control. These unique characteristics may contribute to such an increase of information pollution that the cost of searching would render certain means of information dissemination essentially worthless.

Similar to the limits of Earth’s “environmental load” with regard to human-made pollution, some of the technologies we have built have lead (unforeseeably) to increased information pollution. This pollution is beginning to manifest it in terms of lost productivity, additional work hours, and decline in true “vacation” times disconnected from work.

Id. at 3–4 (citation omitted).

A tragedy of the commons theory posits that where a resource is available to all who care to use it, the quality of the resource will diminish over time. Individuals will tend to exploit the resource for personal gain rather than taking into consideration what is best for the entire resource-using community. Garrett Hardin, The Tragedy of the Commons, 162 Sci. 1243, 1244 (1968) (“Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.”).

The sheer number of new information published by amateurs through websites, blogs, social networking sites, video-sharing sites, and micro-blogging contributes to the democratization of media, but those sources arguably contribute more than their fair share of information pollution.
A. Modern Media’s Tragedy of the Commons Fosters Increased Information Pollution

Modern media suffers from a “tragedy of the commons,” a dilemma first identified in 1968 by Garrett Hardin in his eponymous *Science Magazine* article. Hardin posited that when a resource is available to all who care to use it, the quality of the resource will diminish over time. Individuals will tend to exploit the resource for personal gain rather than taking into consideration what is best for the entire resource-using community.

Hardin illustrated his point through the story of an open pasture that herdsmen use to graze their cattle. Each herdsman will attempt to sustain as many cattle as he can on

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8 Despite the incredible response Hardin’s article produced, there is no categorical definition of a tragedy of the commons. Shi-Ling Hsu, *What is a Tragedy of the Commons? Overfishing and the Campaign Spending Problem*, 69 ALB. L. REV. 75, 77 (2006) (“Remarkably, of the thousands of putative applications of the tragedy of the commons, not one has sought to formally define the term. In fact, this overabundance of citations highlights the fact that although we invoke it often, we do not know exactly what constitutes a tragedy of the commons.”).

Hardin was focused on potential harms of freedom to act in one’s own best interest; other scholars have concentrated on free-rider problems inherent in a commons and the resource scarcity that may result, concluding that property rights are the solution. *Id.* at 77 (“Hardin himself was most concerned with ‘exorciz[ing] the spirit of Adam Smith,’ thus focusing his attack on the perils of unconstrained freedom. Extensive treatments of the tragedy of the commons have emphasized other key aspects of the tragedy, such as resource scarcity, free-rider problems, and lack of property rights.”) (quoting Hardin, *supra* note 6, at 1244) (footnotes omitted). Or as Shi-Ling Hsu put it, the tragedy of a commons is “resource users overexploiting a resource and imposing mutual externalities upon each other.” *Id.* at 77. Hsu further describes a tragedy of the commons stating:

Of course, in overexploiting a resource, resource users may also impose externalities upon a larger group that has some stake in the resource, such as the general public might have in clean air or water. . . . [A] true tragedy of the commons specifically involves a situation in which the resource users are detracting from their own ability to continue to exploit the resource.

*Id.* at 78. This can happen in a variety of situations, including traffic congestion, performance-enhancing drugs in sports, and, finally, informational privacy. *Id.* at 94-100.

9 *Supra*, note 6.

10 *Id.* at 1244 (“Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.”).

11 Hsu, *supra* note 8, at 81-82. Professor Hsu argues that there are three elements of a commons: “(1) [m]utual, uninternalized externalities,” “(2) [g]roup payoffs that are less in uncooperative outcomes than they are in cooperative ones,” and “(3) [a] resource that is rivalrous in consumption.” *Id.*

12 Hardin, *supra* note 6, at 1244. Hardin described it thusly:

The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. . . .

As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, “What is the utility to me of adding one more animal to my herd?” This utility has one negative and one positive component.

1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly
the pasture, asking himself, “What is the utility to me of adding one more animal to my herd?”. \footnote{13} The positive utility to the herdsman is the addition of one more head of cattle, which he alone enjoys. The negative utility to the herdsman is the incremental decrease in the value of the pasture from the possibility of overgrazing, which he shares with every other user of the pasture. Rational herdsmen will conclude that that they profit more than they lose from adding another head of cattle. The problem is that every herdsman has the same incentive to overgraze the pasture at the expense of the other users, leading to the depletion or destruction of the resource. “Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited.”. \footnote{14}

Like the overgrazed open pasture, modern media is a commons because there is (1) ready access to disseminating information, (2) without bearing the costs of spreading misinformation, (3) in a relative vacuum of property rights or other regulation that would allow policing of the commons or exclusion of offending users. Each of these elements of a commons as applied to modern media is dealt with in turn.

1. Modern media is a commons because there is ready access to disseminating information.

Like the accessibility of the open pasture and in contrast to the exclusivity of traditional media, modern media is easily accessible to anyone with access to the Internet. Modern media is dominated by user-generated material such as blogs, YouTube, Twitter, and Facebook. It suffers from a commons because users can readily publish information, but they cannot keep others from doing the same. \footnote{15} Professor Brian Leiter argues that not only are the financial barriers to publishing on the Internet low, but also the social barriers to publishing on the Internet are low:

\begin{quote}
+1.
2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of -1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another, . . . But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited.

\textit{Id.}
\end{quote}

\footnote{13} \textit{Id.} (internal quotation marks omitted).
\footnote{14} \textit{Id.}
\footnote{15} See also Brian Leiter, \textit{Cleaning Cyber-Cesspools: Google and Free Speech, in The Offensive Internet: Privacy, Speech and Reputation} 155, 156 (Saul X. Levere & Martha Craven Nussbaum eds., 2010) (“The harm of speech in cyberspace is sufficiently serious that we should rethink the legal protections afforded cyber speech that causes dignitary harms. Thanks to Google (and similar search engines), cyber speech tends to be (1) permanent, (2) divorced from context, and (3) available to anyone.”) [hereinafter \textit{The Offensive Internet}].
Prior to cyberspace, if you wanted to reach more than your immediate circle of acquaintances, you usually had to have some kind of competence, education, status, intelligence, and ability; otherwise no one would listen to or publish you. Now [those that would perpetuate online harms] need only a computer in order to abuse their targets, and to do so in a way that permits their defamation and harassment to be visited and revisited again and again by countless people anywhere on the planet, visitors who are often deprived of almost all relevant information about the speaker or his targets.\(^{16}\)

This is because it is much easier and more effective to disseminate bad information over the Internet, as opposed to other media. Reaching a worldwide audience has never been cheaper or more accessible, whether for the purpose of intentionally spreading false information or simply to spread spam or other worthless content.\(^{17}\)

2. Modern media is a commons because users do not bear the costs of spreading misinformation.

Like the herdsmen using the open pasture but only internalizing a fraction of the cost, modern media participants do not bear the full cost of their use.\(^{18}\) New media is shielded from many of the traditional consequences of publishing bad information. Real or perceived threats of litigation, the influence of advertisers, and concern about credibility all work to encourage traditional media to editorialize published content.\(^{19}\) Likewise, the high cost of entry associated with being a traditional publisher and the reputational value associated with being one of only a few voices encourage traditional media to take appropriate levels of precaution in publishing harmful information.\(^{20}\) These incentives are largely absent in new media.

New media users are further shielded through the use of anonymous speech, which some commentators have suggested is directly correlated to a proliferation of harmful speech and websites that host such speech.\(^{21}\) Professor Leiter calls these sites “cyber-
cesspools,” which he defines as “chat rooms, websites, blogs, and often the comment sections of blogs[,] which are devoted in whole or in part to demeaning, harassing, and humiliating individuals . . . .” Because anonymous speakers are free from social sanctions, they can disseminate false information, hurtful speech, or low quality speech largely unabated.  

3. Modern media is a commons because there is a lack of legal sanctions to police or exclude users.

Modern media suffers from a vacuum of property rights or regulation that would provide adequate policing of the commons or would provide for the exclusion of offending users. Much of harmful speech is not actionable as a tort because it does not rise to the requisite level of harm. Furthermore, Section 230 of the Communication Decency Act absolves online service providers of most defamation liability and bars states from attempting to impose any stricter liabilities. Section 230 specifies that “No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.”

Section 230’s immunity has been widely criticized for this reason. As one critic opined:

simply do not have the resources. Levmore, supra note 19, at 57 (“If the Internet’s first anonymity problem is the costs imposed on [an aggrieved individual], then its second anonymity problem is that Internet entrepreneurs with interactive sites are essentially obliged to spend resources in order to control the content of these sites, lest a high noise-to-signal ratio destroy the value of the medium to its users.”). This phenomenon has become so powerful that people are now being hired just to police websites for uploaded content that is deemed inappropriate. See Brad Stone, Policing the Web’s Lurid Precincts, N.Y. TIMES, July 19, 2010, at B1.

22 Leiter, supra note 15, at 155.


24 Levmore, supra note 19, at 50 (“One can be the victim of soapbox invectives, crude thoughts recorded on a bathroom wall, malignant lines printed in a letter to the editor of a newspaper, hurtful statements or footage broadcast on television, or the same nasty words written in a comment on a blog site. The likelihood of injury seems greatest in the last of these settings, and it is there that the injured party is least protected by the law.”). See also Leiter, supra note 15, at 167 (“Both tortious harms and dignitary harms are, in consequence, more harmful than ever before.”).

25 Levmore, supra note 19, at (“Cyber cess-pools are thus an amalgamation of what I will call ‘tortious harms’ (harms giving rise to causes of action for torts such as defamation and infliction of emotional distress) and ‘dignitary harms,’ harms to individuals that are real enough to those affected and recognized by ordinary standards of decency, though not generally actionable.”). 47 U.S.C. § 230 (2006).

26 Id. § 230(e)(3) (“No cause of action may be brought and no liability may be imposed under any State or local law that is inconsistent with this section.”).

27 Id. § 230(c)(1).

28 Leiter, supra note 15, at 165 (“The effect of [Section 230] has been to treat cyber-cesspools wholly different from, for example, newspapers that decide to publish similar material. Whereas publishers of the latter are liable for the tortious letters or advertisements they publish, owners of cyber-cesspools are held legally unaccountable for even the most noxious material on their sites, even when put on notice as to its potentially tortious nature.”).
[No blog owner, or chat room administrator, or search engine operator, has any legal reason to make it harder for the Sociopath to express his thoughts about Jane Doe, to express them with no contextual information about the Sociopath or his target, and to do so in ways that are no longer ephemeral, but etched into the Internet’s permanent memory, thanks to Google, for anyone anywhere to discover.]

Because Section 230 provides greater immunity to easily accessible and searchable Internet-based speech than the immunity that traditional publishers enjoy, some have argued that Section 230 provides the least protection where the harm is greatest.

Because modern media suffers from a tragedy of the commons, users are incentivized to overproduce low- or no-value speech. This information pollution increases search costs by leading users repeatedly down erroneous paths, possibly preventing them from ever discovering the truth. Without intervention, the quality of the information pool will continue to degrade until users give up on certain means of dissemination.

B. The Increased Harm from Bad Digital Information and the Lack of a Means of Removal

Due to cheap electronic storage, misinformation will only accumulate and never diminish. There is real harm in bad information preserved in this way, not just to the subjects, but to everyone. Once bad information gets published it “will live on and on in libraries carefully archived, scrupulously indexed . . . silicon-chipped, deceiving researcher after researcher down through the ages, all of whom will make new errors on the strength of the original errors, and so on and on into an exponential explosion of errata.”

Professor Enrico Coiera, Director of the Centre for Health Informatics at the University of New South Wales, warns what is at stake:

For information consumers, a variation of Malthus’ [sic] law predicts that the exponential growth in information will mean that specific information will become increasingly expensive to find, because search costs will grow but human attention will remain limited. Furthermore, the low cost of creating poor-quality information on the Web means that the low-quality information may eventually swamp high-quality resources. The use of reputable information portals on the Web, or smart search technologies, may help in the short run, but it is unclear whether an “information famine” is avoidable in the longer term.

Because of the cumulative nature of digital storage, misinformation will accumulate ad infinitum, impairing the ability of people to sift through the muck to

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30 Id. at 167.
31 Id. at 169 (“The real question is why cyberspace should be treated more protectively when it comes to tortious harms and why it should not, in fact, be treated more restrictively when it comes to dignitary harms, given how much more harmful they are in cyberspace.”).
33 John McPhee, Checkpoints, NEW YORKER, Feb. 9, 2009, at 59 (internal quotations marks omitted).
uncover the truth.\textsuperscript{35} Even search engines like Google are failing to keep up with the accumulation of bad digital information. The limitations of Google’s search algorithm in filtering out low-value information have been most recently exploited by “search engine optimization” (“SEO”) tactics wielded by content farms.\textsuperscript{36}

SEO are methods employed by websites to rise to the top of search results.\textsuperscript{37} SEO can involve actively seeding content with search-friendly keywords, even listing those keywords as “tags” at the beginnings of articles.\textsuperscript{38} Sites like The Huffington Post are noted for their successful use of such tactics, generating content targeted more to search engines than humans.\textsuperscript{39} More underhanded tactics include the use of hidden keywords in the text or the manipulation of “links” that might make the website look more popular than it really is to Google’s search engine.\textsuperscript{40}

In a recent example of egregious SEO, the New York Times ran an investigative report on J.C. Penney’s unlikely dominance of Google’s search results.\textsuperscript{41} Leading into the 2010 holiday season, J.C. Penney was turning up as the first search result for terms as diverse as “dresses,” “bedding,” and “area rugs.” Describing it as “the most ambitious attempt [at gaming] I’ve ever heard of,” the Times uncovered a number of tactics used by J.C. Penney that, while not illegal, violate Google’s policies by paying for a number of links to its site to be scattered across the Internet.\textsuperscript{42} The majority of the sites linking to J.C. Penney were unrelated to department store retail.\textsuperscript{43} When the Times notified Google of its investigative efforts, Google confirmed that J.C. Penney was in violation of its policies and sank J.C. Penney’s relevancy rating, in some instances to the point of obscurity.\textsuperscript{44} Without the Times doing its own investigation, however, J.C. Penney most likely would not have been caught.

\textsuperscript{35} Charles Seife, Malthusian Information Famine, in THIS WILL CHANGE EVERYTHING: IDEAS THAT WILL SHAPE THE FUTURE 139, 140 (John Brockman ed., 2010) (“Information grows exponentially, but useful information grows only linearly.”).
\textsuperscript{36} See Kit Eaton, Google Search Tweak Pours Salt on Content Farms, FAST COMPANY (Feb. 25, 2011), http://www.fastcompany.com/1731681/google-changes-search-algorithms-upsets-content-mills-apple-carts Google declines to detail how its search engine’s algorithm evaluates criteria. Segal, supra note 17. What is known is that it uses an algorithm to populate its organic results based on the number of times that a site is linked to from other sites. Id. Certain websites have, at times, been inordinately successful at having their website pop up at the top of Google’s search results. See id.
\textsuperscript{37} See, e.g., Miller, Web Words that Lure the Readers, supra note 17; Miller, Seeking to Weed Out Drivel, Google Adjusts Search Engine, supra note 17; Segal, supra note 17.
\textsuperscript{38} This is referred to as White Hat SEO. Segal, supra note 17.
\textsuperscript{39} Segal, supra note 17. The online news source, The Huffington Post, appears to be one of the most successful S.E.O. gamers. Because it posts stories of questionable newsworthiness, traditional news media and search-savvy techies suggest that the website is little more than a content farm solely motivated by high traffic. However, its recent acquisition by AOL appears to have renewed efforts at serious journalistic effort while still using “social media optimization” as a way of expanding readership. Miller, Web Words that Lure the Readers, supra note 17. Id.
\textsuperscript{40} This is referred to as Black Hat SEO. See, e.g., Miller, Web Words that Lure the Readers, supra note 17; Miller, Seeking to Weed Out Drivel, Google Adjusts Search Engine, supra note 17; Segal, supra note 17.
\textsuperscript{41} Segal, supra note 17.
\textsuperscript{42} Id. Google penalizes or outright blocks websites that arbitrarily place large numbers of links to its page across the web in order to optimize their position in search results.
\textsuperscript{43} Id.
\textsuperscript{44} Id. Google has deleted some Black Hatters from its results. Id. While it makes sense on its face that Google should (and does) do this to offender websites, there are opposing concerns. For example, users seeking a certain website that has been penalized, i.e. placed lower on the search results, will have to search
¶21 In February of 2011, in reaction to bad press and increasing user frustration, Google rolled out a new algorithm programmed to reward high-value sites and downgrade sites that merely parrot popular Internet activity. Google claimed that users would quickly notice the change. Google followed up the algorithm change with an option that allows users to block sites they find unhelpful. Under the title “Hide Sites to Find More of What You Want,” the Official Google Blog promised that once you block the site, it would no longer populate your search results. Far from reassuring, the recent Google changes have merely highlighted the inherent vulnerabilities of relying on a third-party search engine to filter out bad information.

¶22 Modern media represents a distinct departure from traditional media due to its vulnerability to tragedy-of-thecommons problems and the permanency of bad digital information. As information accumulates exponentially but our ability to process information remains constant, legal rules and regulations regarding the quality of information may be an important supplement to technological or market fixes to the problem of information pollution.

III. A NEW CAUSE OF ACTION FOR MISINFORMATION

¶23 Modern media is more susceptible to information pollution than traditional media and consequently warrants different legal rules than those addressed to traditional media. This part proposes a new cause of action for misinformation that gives individuals small enforceable property rights to certain pieces of personal information. Should the very limited property rights be successful, further expansion may be considered where appropriate.

45 Miller, Seeking to Weed Out Drivel, Google Adjusts Search Engine, supra note 17.
47 The blog explained:

We’re adding this feature because we believe giving you control over the results you find will provide an even more personalized and enjoyable experience on Google. In addition, while we’re not currently using the domains people block as a signal in ranking, we’ll look at the data and see whether it would be useful as we continue to evaluate and improve our search results in the future.

48 For many low-value sites, these two adjustments may mean less traffic in the immediate future. However, SEO specialists may discover and exploit vulnerabilities in the new algorithm. Filtering is based on popularity of the site, yet being at the top of Google search engine results perpetuates popularity, making concrete the old German adage, “an old error is more popular than the new truth.”
49 Levmore, supra note 21, at 60–61 (“Even if most communications of a certain kind is useless or offensive, the free speech advocate opposes regulation because it might chill or eliminate some valuable communications . . . . This description is however, insufficiently sensitive to the availability of alternatives.”).
50 See infra Part III for a discussion of information pollution rules targeted to traditional media, such as defamation.
A. A New Limited Property Right to One’s Personal Information

¶24 This paper proposes mitigating the harm from information pollution by giving individuals property rights to personal information. The property right would cover certain readily identifiable pieces of information, such as the individual’s date of birth or the telephone number of their business. Should a publication or other source misrepresent those pieces of information, the rights-holder could require a retraction, an amendment to a webpage, or other remedy meant to correct the information without imposing punitive damages on the publisher. Individuals would have a natural incentive to police their own information, and, by maintaining their own small corner of the information commons, each individual would decrease the overall harm from information pollution.

1. Property rights are the traditional remedy for a tragedy of the commons.

¶25 A tragedy of the commons thrives in a vacuum of regulation or legal entitlements. The problem can be cured by assigning property rights to the commons, whereby users can prevent each other from abusing shared resources. Using Hardin’s original example, exclusionary property rights could be assigned to herdsmen who could then properly maintain the pasture by permitting only certain uses. The herdsmen would have an incentive to do so because they would then be internalizing the costs of overgrazing in the form of decreased value to their property.

¶26 Individuals also have an incentive to police their personal information, either a financial interest in maximizing the value of their persona or of their business or an interest in one’s personhood. For instance, an individual might use the right to protect his or her own financial interest by correcting a phone number or address for a business, thereby avoiding the possible diversion of business.\textsuperscript{51}

¶27 An example of how a person might use the right to protect a more personal interest is illustrated in a New York Times Op-Ed, in which media lawyer and former social psychologist Zick Rubin tells the story of how Wikia.com listed him as having died in 1997.\textsuperscript{52} Rubin humorously describes his predicament and his attempts to remedy it:

I knew that the report of my death could be bad for business, so I logged into Wikia.com and removed the “1997.” But when I checked a while later, I found the post had reverted to its prior form. I changed it again; again someone changed it back. Apparently the site had its doubts about some lawyer in Boston tinkering with the facts about American psychologists.

When I complained to Wikia.com, I got a prompt and friendly reply from its co-founder, Angela Beesley, sending me her “kind regards” and telling me that she had corrected the article. But when I checked a week later, the “1944-1997” had

\textsuperscript{51} Although some businesses, like Google, welcome corrections, see Ways to Correct Business Information, GOOGLE MAPS, http://maps.google.com/support/bin/answer.py?hl=en&answer=171429 (last visited Sept. 13, 2011), others may try to up-sell to an advertisement before the correction is made, see FTC Puts Business Directory Scam out of Business, FED. TRADE COMM’N (Feb. 21, 2006), http://www.ftc.gov/opa/2006/02/business_directory.shtm.

\textsuperscript{52} Zick Rubin, How the Internet Tried to Kill Me, N.Y TIMES, Mar. 13, 2011.
returned. So I e-mailed her again (subject line: “inaccurate report that I am
dead”), and got the following explanation:

“My change to the page was reverted on the grounds that the info included in this
article was sourced from Reber and Reber’s the Dictionary of Psychology, third
edition, 2001. Is it possible the page is talking about a different Zick Rubin?
The article is about a social psychologist.”

I didn’t doubt that the Dictionary of Psychology was a highly authoritative
source, and yet I persisted in wondering why Reber—or, for that matter, Reber—
would know more than I would about whether I was alive or dead.  

Rubin confirmed that the Reber and Reber book did list his death as being in 1997
and contemplated suing for defamation, but upon researching the matter discovered that
“a false report of death is not on its own considered libelous.”  

Weeks later, Rubin checked the site again and noted that, “Wikia.com had made the gutsy call that I was a
reliable source on my own existence” and corrected the false report of his death.

The proposed property right in one’s personal information would fill the current
regulatory gap by providing individuals like Rubin a means of ensuring that their
personal information is reported accurately.

2. Allowing individuals to police their own section of the pool of information would
enable a self-enforcing reduction in information pollution.

Although a connection to an individual interest (e.g., financial or reputational) is
not the main focus of the property right, the presence of an individual interest in the
misrepresented information ensures that the enforcement regime will be self-enforcing.

Self-enforcing regimes are ones in which users are given incentives to “perpetuate a
mutually beneficial status quo.”  

“If we don’t give you a receipt, your purchase is free,” read many signs attached to cash registers in coffee shops, bakeries, fast food restaurants,
and other stores where small cash transactions are routinely conducted. These guarantees
serve as a form of auditing, using the customer to police the behavior of employees. By
promising the customer a receipt, the sign discourages employees from giving the
customer his coffee and then pocketing the payment without ringing it up on the cash
register. Although this typically happens with small purchases that the employee hopes
will escape notice, the aggregation of these small amounts can significantly hurt a store’s
bottom line, a problem known as “shrinkage.”  

The business owner attempts to prevent this by giving the customer a “right to receipt.”  

By incentivizing the customer to audit

53 Id.
54 Id.
55 Id.
57 JOHN DAVIS, MEASURE MARKETING: 103 KEY METRICS EVERY MARKETER NEEDS 104–05 (2007).
58 The same principle works for any “customer as cop” customer service guarantee. For instance, a gas
station might guarantee, “if we don't ask to check your oil, we'll give you a quart for free.” The business
owner’s public guarantee encourages the customer to enforce the business’s policies against the business’s
own employees.
each of his or her purchases, the sign increases the likelihood that employees will process each purchase through the cash register.

32 The lesson of the “customer as cop” scheme is that the benefits of self-enforceable rights extend beyond the benefits to the holder of that right. In the coffee shop example, the participants in the transaction are the customer (who is enforcing his right to a receipt) and the employee (who is inclined to bypass the cash register, either through negligence or fraud). Yet the customer’s enforcement of his or her right also benefits the business owner, who experiences less shrinkage, and even other customers, who may experience lower prices as a result of reduced “shrinkage.”

33 The traditional self-enforcing scheme in the context of information dissemination is defamation. The plaintiff in a defamation case sues to protect his right to reputation. Although the defamation plaintiff is not primarily concerned with information accuracy generally, by asserting his specific complaint he makes real and credible the financial threat to publishers who fail to get the facts right. This, in turn, causes publishers to invest in mechanisms for improving accuracy, e.g., explicit internal practices and fact-checking departments. Thus, by providing an actionable right for harm to reputation, defamation also punishes “information polluters”—those who would contaminate the available pool of information with falsehoods. The benefit from these mechanisms extends to every person later reported on by the publisher, and, even wider, to the audience for that information, by improving the quality and accuracy of that information.

34 Defamation used to be much more credible as a threat to would-be information polluters.59 As the Supreme Court has expanded the protections of the First Amendment over the last 50 years, they have, simultaneously, run up against—and reduced—the protections afforded by the tort of defamation.60 During the era of the Civil Rights Movement,61 Vietnam and the Pentagon Papers,62 and Watergate,63 the Court repeatedly weighed the press’s right to report against the harm it might cause, and the Court

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59 Defamation was once a strong example of self-enforcing check on information pollution. Defamation became a less credible threat beginning with New York Times v. Sullivan and the line of cases that followed it, which together represented the first significant extensions of First Amendment protection over false speech. Prior to those cases, the characteristics of a defamation suit had remained virtually unchanged from the birth of the First Amendment. Plaintiffs were subject to the various state defamation laws, some of which had imposed strict liability under a defamation per se theory. N.Y. Times Co. v. Sullivan, 376 U.S. 254, 279 (1964) (“A rule compelling the critic of official conduct to guarantee the truth of all his factual assertions—and to do so on pain of libel judgments virtually unlimited in amount—leads to a comparable ‘self-censorship.’”). Although defamation laws were robust, speech was also considerably more robust with the founding fathers routinely bashing one another in a partisan and scurrilous press.

60 New York Times v. Sullivan and its progeny changed that by raising the standard of proof for a defamation plaintiff. In that case, the Court held that where the target of an allegedly defamatory statement is a public official, a plaintiff claiming defamation must prove actual malice. Id. To establish actual malice, a plaintiff needs to prove that defendant had knowledge of falsity or reckless disregard as to truth or falsity. Id. Mere negligence regarding truth or falsity of statement will not suffice. See RESTATEMENT (SECOND) OF TORTS § 600 (1977). See also Jeffrey F. Ghent, Defamation by Radio or Television, 50 A.L.R. 3d 1311 (1973) (examining the development of defamation from common law context into broadcast radio and television).


routinely came down on the side of press freedom.64 Furthermore, defamation was not
designed to reduce information pollution, but rather to protect individuals’ reputations.
As such, it is both over- and under-inclusive, harshly punishing some types of
misinformation, while other types of misinformation go undetalled. Providing property
rights in personal information targets information pollution specifically, allowing
individuals to self-police their own corner of the information commons.

B. Minimizing the Chilling Effect on Speech Through Safe Harbors and Technological
Fixes

¶35 Any proposed regulation of information implicates First Amendment issues,
particularly concerns that laws targeted at certain types of harmful speech may have spillover effects to constitutionally protected speech. Although there is serious danger in allowing individuals to censor the speech of others, the proposed property right in one’s personal information could be structured to effectively minimize any potential chilling effect on public discourse.

1. Section 230 and First Amendment jurisprudence are both concerned with the chilling effects of any regulations on speech.

¶36 When proposing solutions for the information commons, it is important to realize that some of these commons were intentionally created due to concerns about the chilling effects of technological advancements and free speech. A successful solution must address both of these concerns.

¶37 Congress explicitly noted in Section 230 of the Communications Decency Act that “interactive computer services have flourished, to the benefit of all Americans, with a minimum of government regulation.”65 Although Congress’s stated policy was “to encourage the development of technologies which maximize user control over what information is received by individuals, families, and schools,” Section 230 also seems to reflect a concern that, if websites were themselves liable for content put on their sites by users, monitoring and legal costs would be cost prohibitive.66

¶38 Similarly, First Amendment jurisprudence has been very concerned with the chilling effects of any speech regulations on protected speech.67 The Supreme Court has

64 Notable exceptions include United States v. The Progressive, Inc., 467 F. Supp. 990 (W.D. Wis. 1979) (enjoining the publication of a magazine article “The H Bomb Secret: How we Got It, Why We’re Telling It,” under the national security exception to the typical prohibition on prior restraints) and Rhinehart v. Seattle Times Co., 654 P.2d 673 (Wash. 1982) aff’d, 467 U.S. 20 (1984) (holding that when a protective order is entered on a showing of good cause, is limited to the context of pretrial discovery, and does not restrict the dissemination of the information if it is gained from other sources in addition to the discovery, it does not offend the First Amendment).
67 Gertz v. Robert Welch, Inc., 418 U.S. 323, 340–41 (1974) (“Although the erroneous statement of fact is not worthy of constitutional protection, it is nevertheless inevitable in free debate. As James Madison pointed out in the Report on the Virginia Resolutions of 1798: ‘Some degree of abuse is inseparable from the proper use of every thing; and in no instance is this more true than in that of the press.’ And punishment of error runs the risk of inducing a cautious and restrictive exercise of the constitutionally guaranteed freedoms of speech and press. Our decisions recognize that a rule of strict liability that compels
asserted that, although there is no constitutionally protected value to false speech, some amount of false speech must be tolerated so as not to chill constitutionally protected true speech. Courts have given the press considerable legal latitude, repeatedly holding that the press’s right to report outweighed any of the harm that it might cause. To the extent that there was a danger of misinformation, courts have traditionally required parties to fight it out in the media, relying on the audience to make their own determinations of truth after hearing both sides of the story. Courts have made the determination many times that it is better for some false information to be published than to suppress truthful information. This reasoning relies in part on a belief in an efficient marketplace of ideas.

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Professors Leiter challenges these rationales to the extent that they do not contribute to utility and are not even categorically interested in what is true and what is not. "For this line of argument to justify a type of speech, the speech in question must be related to the truth or our knowledge of it, and discovering this kind of truth must actually help us maximize utility.".

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Although giving individuals property rights in their personal information might chill speech, there is some question as to whether this is First Amendment protected speech. Recently, the Second Circuit, in Sorrell v. IMS Health Inc., invalidated a Vermont Prescription Confidentiality law as a restriction on free speech. In contrast, the First Circuit has upheld similar laws restricting access to government collected data by analyzing access to the information as commercial conduct and therefore outweighed by privacy interests. IMS Health Inc. v. Mills, 616 F.3d 7, 35 (1st Cir. 2010); IMS Health Inc. v. Ayotte, 550 F.3d 42 (1st Cir. 2008). Similarly, in a leading case on the collection and sale of government data, the U.S. Supreme Court upheld a congressional act that restricted State sales of driver personal information on the basis of consent. Reno v. Condon, 528 U.S. 141 (2000) (assessing the congressional limits under the Commerce Clause to regulate states’ selling driver’s personal information without consent).
ideas in which truth prevails over falsehoods\textsuperscript{72} and the efficacy of rebutting false information with true information,\textsuperscript{73} both of which have been questioned in recent years.\textsuperscript{74} The benefit of the proposed property right in personal information is that it does not necessarily rely on an efficient marketplace of ideas or the efficacy of rebuttal, nor would it unnecessarily chill constitutionally protected speech if the enforcement were structured to be minimally punitive, with safe harbors that provide for cheap and technologically efficient compliance.

2. Non-punitive remedies and technological fixes can reduce information pollution while accommodating policy concerns over chilling speech or technological developments.

The property right over personal information that this paper proposes can be narrowly tailored to accommodate both the First Amendment concern of chilling speech

\textsuperscript{72} The First Amendment concept of the “marketplace of ideas” is widely credited to Oliver Wendell Holmes, Jr. The instance most often associated with this attribution occurred in Holmes dissent of \textit{Abrams v. United States}, 250 U.S. 616, 630 (1919) (“Persecution for the expression of opinions seems to me perfectly logical. If you have no doubt of your premises or your power and want a certain result with all your heart you naturally express your wishes in law and sweep away all opposition. . . . But when men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out. That at any rate is the theory of our Constitution.”).

\textsuperscript{73} \textit{Gertz}, 418 U.S. at 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. Public officials and public figures usually enjoy significantly greater access to the channels of effective communication and hence have a more realistic opportunity to counteract false statements than private individuals normally enjoy.”). The \textit{Gertz} Court acknowledged in a footnote that “an opportunity for rebuttal seldom suffices to undo harm of defamatory falsehood,” but still maintained its preference for rebuttal as the “first remedy.” \textit{Id.} at 375 n.9 (1974) (“Indeed, the law of defamation is rooted in our experience that the truth rarely catches up with a lie.”).

\textsuperscript{74} Scholars have argued that while the classicist’s view of economic “free markets” has been repeatedly debunked over the past century, the classicist legal conception of a “marketplace of ideas” has remained unexamined. Joseph Blocher, \textit{Institutions in the Marketplace of Ideas}, 57 DUKE L.J. 821, 831–33 (2008). Furthermore, to the extent there is a functioning marketplace for information, its outcome is not necessarily “truth.” \textit{Id.} (“And even if people could reason perfectly, the market \textit{still} might not function as Holmes envisioned, so long as their preferences are too unstable to permit the pursuit of a single truth.”). Research in the area has suggested that information consumers are not looking for the truth so much as information that confirms their own biases. \textit{Id.} (“A related criticism suggests that even if the expression of ideas could be equalized, perhaps through government action, the efficiency of the marketplace of ideas would still be strictly limited by participants’ imperfect ability to reason.”) (footnotes omitted).

Similarly, there is some question as to the efficacy of rebuttal. Even when a rebuttal reaches the original recipient of the misinformation, evidence suggests that he will still believe the original misinformation over the correction. Lee Ross & Craig A. Anderson, \textit{Shortcomings in the Attribution Process: On the Origins and Maintenance of Erroenous Social Assessments}, in \textit{Judgment Under Uncertainty: Heuristics and Biases} 149 (Daniel Haneman et al. eds., 1982) ("[B]eliefs can survive potent logical or empirical challenges. They can survive and even be bolstered by evidence that most uncommitted observers would agree logically demands some weakening of such beliefs. They can even survive the total destruction of their original evidential bases."). The name for this is “confirmation bias”: a predisposition to believe information that supports a preconception, even when that information is later shown to be inaccurate. \textit{Id.}
and Section 230 of the Communication Decency Act’s concern with chilling technological advancements. The property right would accomplish this through the use of non-punitive remedies with safe harbors.

¶40 Not only would the property right be narrowed to cover only readily verifiable information, it would also provide publishers with safe harbor provisions, which if complied with, would preclude the availability of any damages. An example of a similar non-punitive safe harbor is Federal Rule of Civil Procedure 11. Rule 11 promotes truth telling in litigation by requiring attorneys to certify that their factual contentions have evidentiary support.75 Violators of Rule 11 are subject to sanctions, but they are also provided with a 21-day safe harbor to correct any false contentions.76 If they withdraw the contention within this period, they are protected against a motion for sanctions.77

¶41 A similar safe harbor provision could be adopted for the new property right in one’s personal information. Just as parties frequently work out disputes among themselves through use of the Rule 11 safe harbor provision, parties in an informational dispute will have similar incentives to resolve disputes amongst themselves, keeping legal costs down. Parties would not be allowed to collect damages against a publisher who has complied with the safe harbor. Through threat of legal action, however, content providers would have greater accountability and a legal incentive to actually respond to requests to correct misinformation.

¶42 The property right could also provide for simple technological fixes or website design alterations that would function as a cheap safe harbor, such as a right of reply. The right of reply would be a particularly appealing option to passive information sites, such as customer review sites. Customer review sites heavily rely on user-generated content that is difficult or impossible for the site owner to verify. Instead of requiring these sites to extensively fact-check, these sites could instead opt to allow property owners to assert their own version of the truth.

¶43 A good example of this type of right of reply is on RateMyProfessors.com. The content from RateMyProfessors.com is generated from students commenting on the performance of their professors based on criteria such as ease, clarity, helpfulness, and a chili pepper for being “hot.”78 The purpose of the site is to allow students to vent or issue warnings or endorsements to would-be students about various professors and is consequently a receptacle for both insults and praise. To promote an open dialogue, the site allows professors to “rebut” any particular statement posted about them, with those rebuttals published in conjunction with the original student comment.79 In this way, RateMyProfessors.com allows for correction of misinformation through minimum oversight.

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75 FED. R. CIV. P. 11.
76 Id.
77 Id.
79 Id. When you click on the “rebuttal” tab, you receive the following message: “We invite you to register as a certified professor. With a Certified Professor Account you can post blog-like responses to your ratings, as well as add a photo to your professor page. Your rebuttals will accessible from a tab to the right of the ‘User Comments and Ratings’ tab.”.)
¶44 Under the new property right, this type of rebuttal option would comply with the safe harbor provision.

C. The Unavailability of Money Damages and Other Means of Compensating the Victim

¶45 Although money damages would generally be unavailable for violations of the property right, an optional aspect would be a victim compensation fund, such as the one proposed by Professor Frederick Shauer for defamation plaintiffs. 81

¶46 As discussed above, free speech is important to a functional democracy, so important that its protections often trump the rights of individual victims. 82 Professor Shauer notes that “robust free speech systems protect speech not because it is harmless, but despite the harm it may cause” and that they “shelter from legal reach a set of behaviors that could otherwise be punished and a set of harms that could otherwise be compensated.” 83 Limitations on damages help protect free speech. They also prevent victims of property right violations from being compensated for real harm that they may suffer as a result of the false information.

¶47 A good example of a victim suffering harm as a result of the publication of false personal information is the plaintiff from Zeran v. America Online, Inc. 84 In that case, plaintiff Kenneth Zeran was the target of alleged online defamation, specifically a post on an AOL message board advertising tasteless shirts in the wake of the Oklahoma City bombing including the slogans “Visit Oklahoma . . .It's a BLAST!!!”, “Putting the kids to bed . . . Oklahoma 1995”, and “McVeigh for President 1996.” 85 The AOL post advised parties interested in purchasing a shirt to call “Ken” and listed Zeran’s personal phone number. 86 Zeran was inundated with hateful phone calls, including death threats. 87 Zeran alleged that he was unable to change his phone number because it was also the number of the business that he was operating out of his home. 88 Zeran notified AOL, which responded by taking down the initial post but failed to block the poster, who kept posting...
similar offers of offensive merchandise. Zeran sued AOL for damages suffered, but the Fourth Circuit denied relief based on AOL’s affirmative defense under Section 230 of the Communication Decency Act, reasoning that “Congress recognized the threat that tort-based lawsuits pose to freedom of speech in the new and burgeoning Internet medium” and enacted Section 230 as a protection from such threats to speech.

In Professor Schauer’s proposal, victims like Kenneth Zeran would not have to bear the full cost of our free speech rights but instead would be compensated from the victim compensation fund for any real harm suffered. Professor Schauer argues “[i]f it is ‘our’ First Amendment, then why don’t we and not [victims] pay for it?” Professor Schauer proposes that funding would be provided by the state, which would compensate only those plaintiffs who could otherwise succeed on their legal claims but for First Amendment protections. Victims would be limited to actual damages, not punitive.

Professor Schauer notes that a side benefit of a victim compensation fund is that society “would then understand, as it probably does not now, both the costs of a free speech system, and that the [victim compensation] is the result not of necessity but of a conscious choice about where society wishes the immediate burden of its rights to fall.” Such an analysis would at minimum “focus[ ] us more sharply on the costs of the First Amendment, and on the identity of those who are paying for them.”

A victim compensation fund is an optional feature to the property right in personal information that would ensure that victims of truly damaging information would be compensated without unduly chilling speech.

IV. Conclusion

The public pool of information is becoming increasingly more polluted, due to modern media’s tragedy of the commons and the permanency of digital information. The marketplace of ideas is not well equipped to treat this information pollution; legal action is required.

Granting property rights is the traditional remedy to prevent pollution of a commons. An enforceable but limited property right to an individual’s readily verifiable personal information would incentivize individuals to maintain their own small corner of the information commons, decreasing the harm from information pollution. The property right could be structured in a way such that its enforcement would have a limited chilling effect on speech, for instance by including safe harbor provisions and limiting monetary damages. An optional victim compensation scheme could defray some costs to victims while minimizing any chilling effect on speech.

90 Zeran, 129 F.3d at 330.
91 Schauer, supra note 81, at 1322 (challenging the assumption that “because a price must be paid for free speech, it must be the victims of harmful speech who are to pay it”).
92 Id. at 1346.
93 Id. at 1347 (citing Paul F. Rothstein, How the Uniform Crime Victims Reparations Act Works, 60 A.B.A.J. 1531, 1531 (1974)).
94 Id. at 1342–43.
95 Id. at 1348.
96 Id.